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Antunes Foodservice Equipment

DIVISION OF A.J. ANTUNES & CO. • ISO 9001 CERTIFIED

A BRAND OF A.J. ANTUNES & CO.

roundup
ANTUNES FOODSERVICE EQUIPMENT®

**DELUXE FOOD
WARMER**
Series 9100100



P/N 1010678 Rev. F 09/04



Owner's Manual

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OWNER INFORMATION

General

The Deluxe Food Warmer (steamer) produces a steam using plain tap water for quick heating and reconstituting of food items. Simple push-button action delivers a shot of water which is immediately converted into steam. Because the amount of steam is consistent, it removes the guesswork and produces a uniform finished product from one operator to the next.

This manual provides the safety, installation and operating procedures for the Deluxe Food Warmer (steamer). We recommend that all information contained in this manual be read prior to installing and operating the unit.

Your Deluxe Food Warmer (steamer) is manufactured from the finest materials available and is assembled to Roundup's strict quality standards. This unit has been tested at the factory to ensure dependable trouble-free operation.

Warranty Information

Please read the full text of the Limited Warranty in this manual.

If the unit arrives damaged, contact the carrier immediately and file a damage claim with them. Save all packing materials when filing a claim. Freight damage claims are the responsibility of the purchaser and **are not** covered under warranty. The warranty **does not** extend to:

- Damages caused in shipment or damage as result of improper use.
- Installation of electrical service.
- Normal maintenance as outlined in this manual.
- Malfunction resulting from improper maintenance.
- Damage caused by abuse or careless handling.
- Damage from moisture into electrical components
- Damage from tampering with, removal of, or changing any preset control or safety device.

IMPORTANT! Keep these instructions for future reference. If the unit changes ownership, be sure this manual accompanies the equipment.



OWNER INFORMATION (continued)**Service/Technical Assistance**

If you experience any problems with the installation or operation of your unit, contact your local Roundup Authorized Service Agency. They can be found in the service agency directory packaged with the equipment.

Fill in the information below and have it handy when calling your authorized service agency for assistance. The serial number is on the specification plate located on the rear of the unit.

Purchased From: _____

Date of Purchase: _____

Model No.: _____

Serial No.: _____

Mfg. No.: _____

Refer to the service agency directory and fill in the information below

Authorized Service Agency

Name: _____

Phone No.: _____

Address: _____

Use only genuine Roundup replacement parts in this unit. Use of replacement parts other than those supplied by the manufacturer will void the warranty. Your Authorized Service Agency has been factory trained and has a complete supply of parts for this unit.

You may also contact the factory at **1-877-392-7854** or **630-784-1000 (outside the U.S. and Canada)** if you have trouble locating your local Authorized Service Agency or need Technical assistance.

IMPORTANT SAFETY INFORMATION

Throughout this manual, you will find the following safety words and symbols that signify important safety issues with regards to operating or maintaining the equipment.

WARNING

GENERAL WARNING. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.

WARNING

ELECTRICAL WARNING. Indicates information relating to possible shock hazard. Failure to observe may result in damage to the equipment and/or severe bodily injury or death.

CAUTION

GENERAL CAUTION. Indicates information important to the proper operation of the equipment. Failure to observe may result in damage to the equipment.

WARNING

HOT SURFACE WARNING. Indicates information important to the handling of equipment and parts. Failure to observe caution could result in personal injury.

In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord connector. Do not attempt to defeat the grounded connector.
- Install or locate the equipment only for its intended use as described in this manual. Do not use corrosive chemicals in this equipment.
- Do not operate this equipment if it has a damaged cord or plug; if it is not working properly, or if it has been damaged or dropped.
- This equipment should be serviced by qualified personnel only. Contact the nearest Roundup authorized service facility for adjustment or repair.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.

The following warnings and cautions appear throughout this manual and should be carefully observed.

- Turn the unit off, disconnect the power source and allow unit to cool down before performing any service or maintenance on the unit.
- The procedures in this chapter may include the use of chemical products. These chemical products will be highlighted with bold face letters followed by the abbreviated HCS (Hazard Communication Standard). See Hazard Communication Standard manual for the appropriate Material Safety Data Sheets (MSDS).
- The equipment should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with separate electrical lines, protected by fuses or circuit breaker of the proper rating.
- All electrical connections must be in accordance with local electrical codes and any other applicable codes.

IMPORTANT SAFETY INFORMATION (continued)

- **WARNING ELECTRICAL SHOCK HAZARD. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS INJURY OR DEATH.**
 - Electrical ground is required on this appliance.
 - Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.
 - Do not use an extension cord with this appliance.
 - Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.
- This equipment is to be installed to comply with the basic plumbing code of the Building Officials and Code Administrators, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).
- On direct water hook-up units, water pressure must not exceed 30 psi (2.1 kg/cm² or 207 kPa). Higher water pressures will cause poor performance, excessive condensation, and flooding of the Steam Generator. To reduce water pressure, install a water pressure regulator and set water pressure between 20-30 psi (1.4 - 2.1 kg/cm² or 138 - 207 kPa). Contact your equipment supplier to purchase a Water Pressure Regulator.
- Do not clean this appliance with a water jet.
- Do not use a sanitizing solution or abrasive materials. The use of these may cause damage to the stainless steel finish.
- To ensure proper steaming characteristics, some calcium/mineral deposits must be present on the generator surface. If, during cleaning, the surface does become free of calcium/mineral deposits, add plain tap water to the surface and allow it to boil off. This may have to be repeated several times to ensure proper steaming characteristics by creating a thin layer of deposits on the surface.
- Chlorides or phosphates in cleansing agents (such as bleach, sanitizers, degreasers, or detergents) could cause permanent damage to stainless steel equipment. The damage is usually in the form of discoloration, dulling of metal surface finish, pits, voids, holes or cracks. **THIS DAMAGE IS PERMANENT AND NOT COVERED BY WARRANTY.**

The following tips are recommended for maintenance of your stainless steel equipment,

- Always use a soft, damp cloth for cleaning, rinse with clear water and wipe dry. When required, always rub in direction of metal polish lines.
- Routine cleaning should be done daily using soap, ammonia detergent and water.
- Stains and spots should be sponged using a vinegar solution as required.
- Finger marks and smears should be rubbed off using soap and water.
- Hard water spots should be sponged using a vinegar solution.

SPECIFICATIONS

Electrical Ratings

DFW SERIES

Voltage	Watts	Amps	Hertz
120	1800	15	50/60
120*	1500	12.5	50/60
230	2800	12.2	50/60

* Canadian unit.

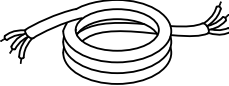
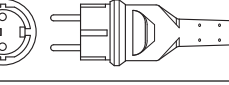
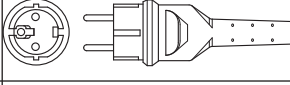
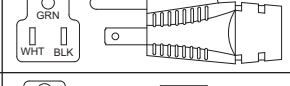
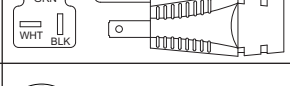
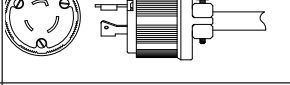
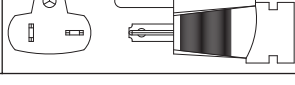
DFWT SERIES

Voltage	Watts	Amps	Hertz
120	1800	15	50/60
230	2800	12.2	50/60

DFWF SERIES

Voltage	Watts	Amps	Hertz
208	3300	15.8	50/60

Electrical Cord & Plug Configurations

Letter Code*	Description	Configuration
C	Commercial Cord	
H	Harmonized Cord	
(H)C***	CEE 7/7, 16 Amp., 250 VAC (Assembly Only).	
(C)F**	5-15P, 15 Amp., 120 VAC., Non – Locking (Assembly Only).	
(C)T**	5-20P, 20 Amp., 120 VAC., Non – Locking (Assembly Only).	
(H)I***	IEC-309, 16 Amp., 250 VAC., Pin & Sleeve (Assembly Only).	
(C)V**	6-20P, 20 Amp., 250 VAC., Non – Locking (Assembly Only).	

* Used in Model Designation

** Indicates that the plug comes with a Commercial Cord

*** Indicates that the plug comes with a Harmonized Cord

⚠ CAUTION ⚠

All electrical connections must be in accordance with local electrical codes and any other applicable codes.

⚠ WARNING ⚠

ELECTRICAL SHOCK HAZARD.

FAILURE TO FOLLOW THE INSTRUCTIONS IN THIS MANUAL COULD RESULT IN SERIOUS INJURY OR DEATH.

- Electrical ground is required on this appliance.
- Do not modify the power supply cord plug. If it does not fit the outlet, have a proper outlet installed by a qualified electrician.
- Do not use an extension cord with this appliance.
- Check with a qualified electrician if you are in doubt as to whether the appliance is properly grounded.

Model Designation

DFWT-250XX

TYPE OF POWER CORD

H = HARMONIZED
C = COMMERCIAL

TYPE OF PLUG

C = CEE 7/7 Schuko
F = NEMA 5-15P
T = NEMA 5-20P
V = NEMA 6-20P
I = International Pin & Sleeve

00 = Manual (non-timer)
50 = Timer

**except DFWF-250 units
with Mfg No. 9100147**

1 = Self-Contained Water Tank
2 = Direct Water Hook-Up

T = 2/3 Size Pan
F = Full Size Pan
NO LETTER = 1/2 Size Pan

SPECIFICATIONS (continued)

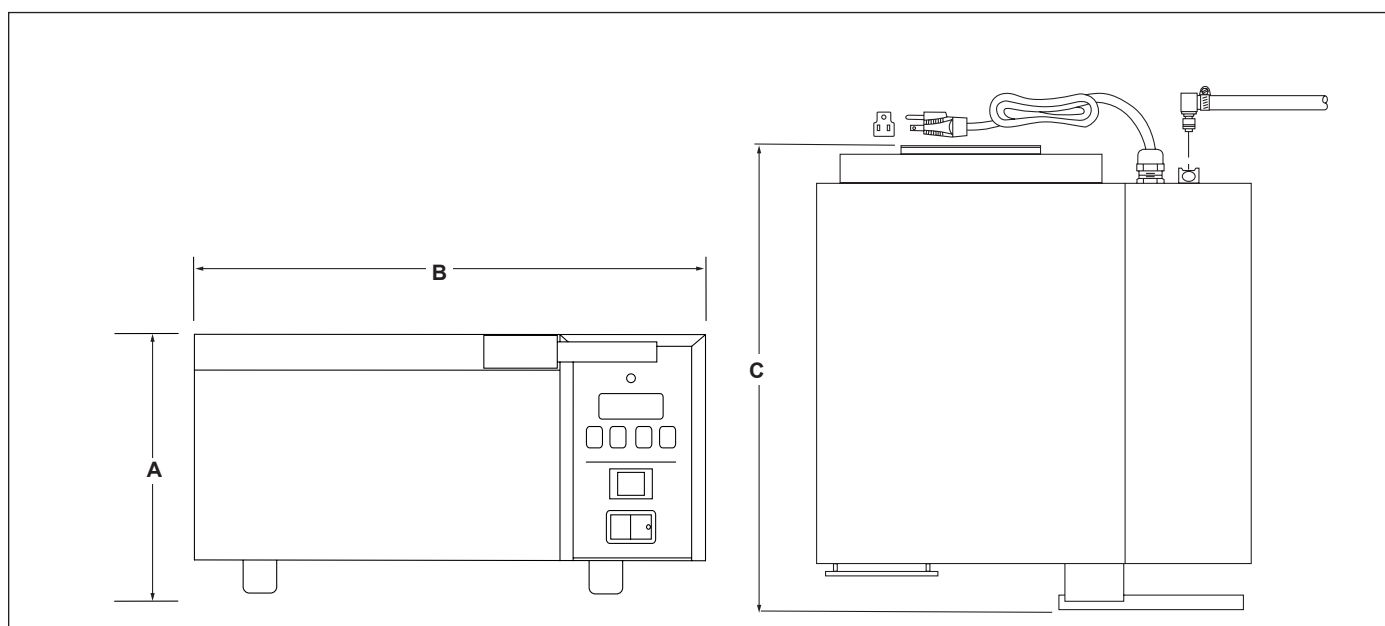
Shipping Weight

DFW-100 Series	40 lbs (18.2 kg)
DFW-200 Series	40 lbs (18.2 kg)
DFWT-100 Series	54 lbs (24.5 kg)
DFWT-200 Series	54 lbs (24.5 kg)
DFWF-250 Series	75 lbs (33.6 kg)

Capacities

DFW Series	2-7/8" (7.3 cm) Deep Half size steam table pan
DFWT Series	2-7/8" (7.3 cm) Deep 2/3-size steam table pan
DFWF Series	4" (10.2 cm) Deep Full size steam table pan

Dimensions



Model	Dim. A	Dim. B	Dim. C
DFW-100/200	8-1/4" (209 mm)	16-1/2" (419 mm)	17-1/4" (438 mm)
DFW-150/250	8-1/4" (209 mm)	16-1/2" (419 mm)	17-1/4" (438 mm)
DFWT-100/200	8-1/4" (209 mm)	20" (508 mm)	17-1/4" (438 mm)
DFWT-150/250	8-1/4" (209 mm)	20" (508 mm)	17-1/4" (438 mm)
DFWF-250	9-7/16" (240 mm)	26-7/8" (682 mm)	17-1/4" (438 mm)

INSTALLATION

Unpacking

1. Remove unit and all packing materials from shipping carton.
2. The unit should come with the items listed below:
 - Owner's Manual
 - Authorized Service Agency Directory
 - Inlet Hose Assembly (DFW/DFWT/DFWF-200/250 only).

NOTE: If any parts are missing or damaged, contact Antunes Technical Service IMMEDIATELY at 1-877-392-7854 or 1-630-784-1000.

3. Remove all packing materials and protective coverings from the unit.
4. Remove and wash all removable parts (Pan, Trivet and Diffuser - Figure 1) in soap and water. Rinse with clean water and allow to air dry.

NOTE: The steam generator surface (Figure 9) will have a white coating of artificial lime deposits. This coating is necessary for steaming characteristics.

5. Wipe all surfaces of the unit with a hot damp cloth.

NOTE: Do not use a dripping wet cloth. Wring out before use.

6. Re-install Pan Diffuser, Pan, and Trivet.

Equipment Setup

GENERAL

When placing the unit into service, pay attention to the following guidelines:

- Make sure power to the unit is off and the unit is at room temperature.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.

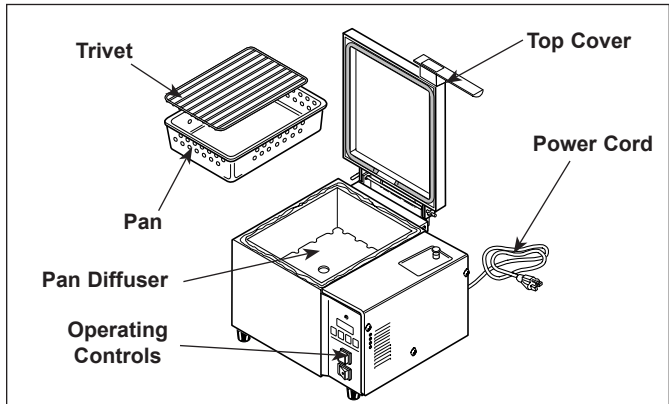


Figure 1. Components

ELECTRICAL

1. Place the unit on a sturdy, level table or other work surface. Turn off the rocker switch (power on/off) before proceeding.
2. Ensure that the line voltage corresponds to the stated voltage on the units specification label and power cord warning tag. If you are unsure of your Line Voltage, contact your electrician.
3. Connect the unit to the power supply.

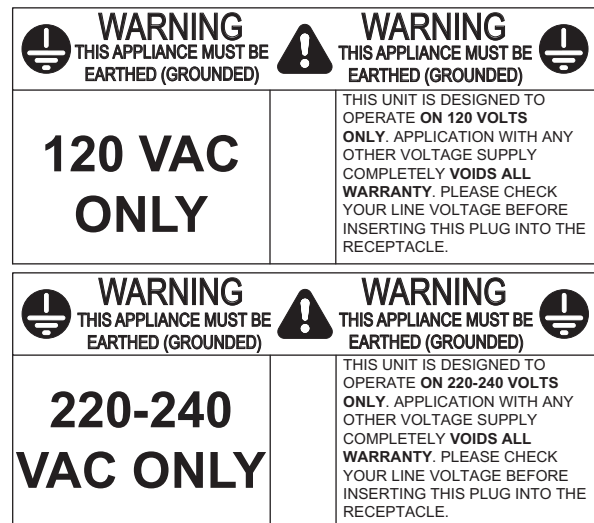


Figure 2. Warning Labels

INSTALLATION (continued)

⚠ WARNING ⚠

Be sure to follow all warnings, precautions, and procedures listed in the Important Safety Information section of this manual before proceeding.

⚠ CAUTION ⚠

All electrical connections must be in accordance with local electrical codes and any other applicable codes.

PLUMBING

NOTE: DFW models are designed to use cold tap water. Distilled water may be used to reduce calcium/mineral deposit build-up and reduce maintenance costs.

Models DFW/DFWT-100/150

⚠ CAUTION ⚠

This equipment is to be installed to comply with the basic plumbing code of the Building Officials and Code Administrators, Inc. (BOCA) and the Food Service Sanitation Manual of the Food and Drug Administration (FDA).

The DFW/DFWT-100/150 models have a self-contained water tank. To fill the self-contained water tank:

1. Open the sliding tank cover on top of the unit (Figure 3).

NOTE: Make sure filter inside tank is installed properly.

2. Pour in cold tap water. The tank will hold approximately 3 quarts (2.81 liters). Do **NOT** overfill the tank.
3. Close the water tank cover.

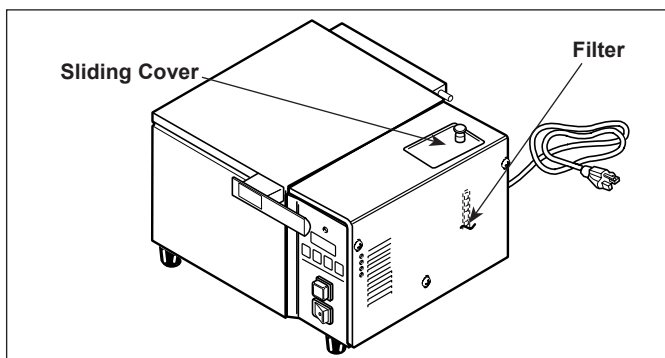


Figure 3. Filling Water Tank DFW/DFWT-100/150

Models DFW/DFWT/DFWF-200/250

⚠ CAUTION ⚠

Water pressure must not exceed 30 psi (2.1 kg/cm² or 207 kPa). Higher water pressures may cause poor performance or flooding. To reduce water pressure, install a water pressure regulator, and set water pressure to 20-25 psi (1.4 - 1.7 kg/cm² or 138 - 172 kPa).

These models require a direct cold water hookup. A Water Inlet Hose and Strainer Assembly (Figure 4) is supplied.

NOTE: Incoming water is controlled by a normally closed (NC) solenoid valve located inside the Steamer's electrical housing.

1. Turn off the water valve (not supplied) that supplies water to the unit (Figure 4).
2. Connect the 1/4" (6.5 mm) I.D. Flexible Tubing to the outlet side of the Water Pressure Regulator and secure using the worm clamp as shown in Figure 4.

NOTE: A Water Pressure Regulator must first be installed as shown in Figure 4. Failure to do so will result in poor steaming and possible flooding. For a single steamer, use Water Pressure Regulator P/N 7000314. For two adjacent steamers, use Water Pressure Regulator P/N 7000235.

3. Turn the water valve on.
4. Over a bucket, press and hold the white plastic tip on the Quick Disconnect Insert (Figure 4) until good, steady water flow is noted (this will purge all air out of the line). Release and note the pressure on the Water Pressure Regulator gauge. It should read 20-25 PSI. If it reads more or less, adjust the pressure by pulling the black knob upwards and turning it clockwise to increase or counter-clockwise to decrease the water pressure. Push the knob down to lock it in place.

NOTE: When adjusting the knob, you must relieve the existing pressure by pressing the white plastic tip on the Quick Disconnect Insert for 3 seconds. This allows the newly set pressure to register on the gauge. Repeat this until the gauge reads 20-25 PSI.

5. Push the Quick Disconnect Insert into the fitting at the rear of the unit until a "click" is heard (Figure 4).

INSTALLATION (continued)

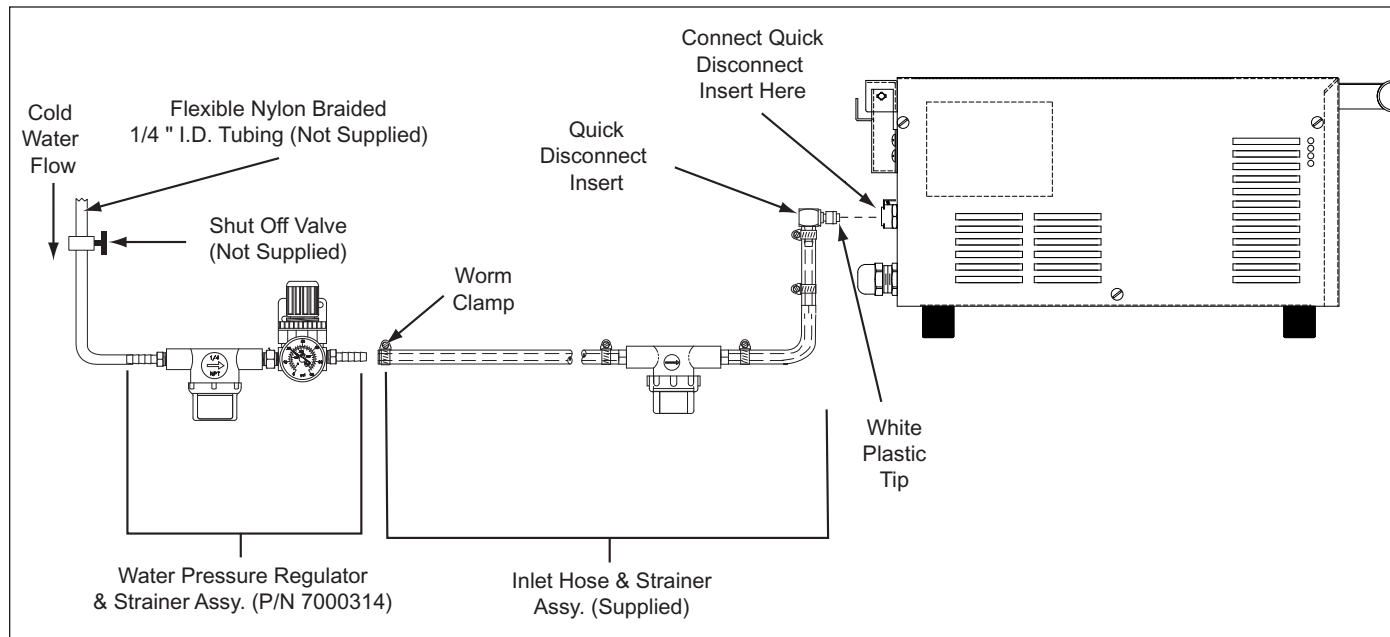


Figure 4. Connecting Water Supply to DFW/DFWT/DFWF-200/250

OPERATION

General Information

ALL MODELS

When the operate button (Figure 5) is pressed and released, power is supplied to the water pump (Water Tank models) or solenoid valve (Direct Water Hookup models). The pump/solenoid operates and water sprays onto the heated steam generator (Figure 9). The water flashes immediately into steam and steams the product.

TIMER MODELS - DFW/DFWT/DFWF-150/250 EXCEPT DFWF-250 WITH MFG. NO 9100147

On Timer Models, one of two operational modes can be used: Single Shot or Timed Cycle

Single Shot

The Operate Button (Figure 5) is pressed and released to initiate a single steam shot. The Control Board applies power to the Water Pump/Solenoid and a “shot” of steam occurs.

Timed Cycle

The control is used to set the desired steamttime (up to 99 minutes, 59 seconds). When the Start/Stop Button (Figure 5) is pressed, the Control Board applies power to the water pump/solenoid at regular intervals for the duration of the displayed cycle time. The display counts down to zero when the cycle is complete, sounds an audible signal, and then reverts back to the original programmed cycle time. The unit is ready for the next cycle when the green ready light is on.

IMPORTANT: Timer Models are factory programmed for the following recommended settings:

- Total Cycle Time = [15.00] (15 minutes)
(Range: 3 sec. to 99 mins 59 secs)
- Shot Interval Time (SHO) = [00:20] (20 seconds)
(Range: 3 secs to 5 mins 59 secs). 20 seconds is recommended.
- Water Volume (H₂O) =
DFW/DFWT/DFWF-250 - [0_50]
DFW/DFWT-150 - [0_80]
(Range: 0.10 seconds to 2.50)

The above settings convert approximately 3/4 oz. (25 milliliters) of water into to steam every 20 seconds for 15 minutes. To change any of these settings see the appropriate Operating Instructions for your specific unit.

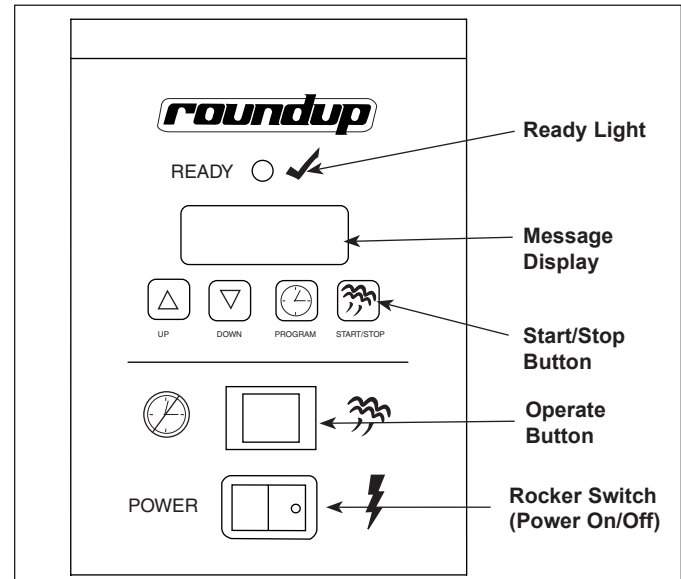


Figure 5. Operating Controls–Timer Models

Operating Instructions For (Non-Timer) Models

1. Turn the Rocker Switch (power On/Off) to ON (Figure 5).
2. Allow the unit to preheat for approximately 30 minutes.

NOTE: Do not push the operate button during warm-up.

⚠ WARNING ⚠

To avoid injury, be careful when opening top cover. Be sure to allow steam to escape before putting hands or face over the steamer.

3. Open the Top Cover and place the product to be steamed onto the Trivet, then close the Cover.
4. Press the operate button for 1 second then release and wait 20 seconds for the steam to penetrate the product. Repeat if product requires more steam (see the Steaming Guide section of this manual).

NOTE: Pressing and holding the operate button for longer than 1 second at a time, and/or too often (before 20 seconds), will flood out the generator surface (Figure 9) and result in poor steaming.

5. Remove steamed product.
6. See the Steaming Guide section of this manual.

OPERATION (continued)

Operating Instructions For Timer Models

1. Turn the Rocker Switch (power On/Off) to ON (Figure 6).
2. Allow the unit to preheat for approximately 30 minutes.

IMPORTANT: The flashing green ready light will become steady when the unit is up to temperature and ready to be used.

IMPORTANT: Do not push the operate button during warm-up. The flashing green light indicates unit is not up to temperature.

3. Open the top cover and place the product to be steamed onto the trivet, then close the cover.

⚠ WARNING ⚠

To avoid injury, be careful when opening top cover. Be sure to allow steam to escape before putting hands or face over the steamer.

4. Single Shot: Press the operate button for 1 second then release and wait 20 seconds for the steam to penetrate the product.
Timed Cycle: Press the start/stop button to begin the steaming cycle. Display will count down to zero.
5. Remove steamed product.
6. See the Steaming Guide section of this manual.

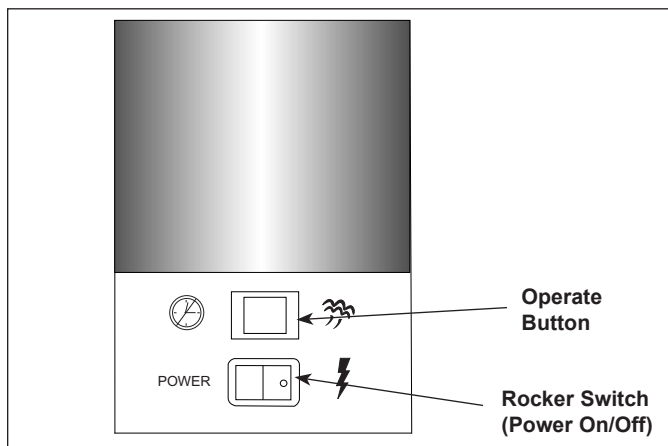


Figure 6. Operating Controls Non-Timer Models

Programming - Timer Models

CYC (Total Cycle Time) refers to the total amount of steaming time set for the product.

SHO (Shot Interval Time) is the time set between shots of steam during a complete cycle.

H2O Setting (Steam Shot Time) is used to adjust the water volume used during each pump/solenoid operation.

The amount of steam produced by your Deluxe Food Warmer (steamer) depends on the amount of water sprayed onto the steam generator.

Flooding of the generator may occur if the H2O setting is set too high. To prevent this from occurring, the Shot Interval Time (SHO) may be increased to allow more time for generator heat recovery. Adjustments should be made to both values to determine the optimum settings for your cooking needs.

To program the control, refer to Figure 7 and use the following procedure in sequence:

1. Turn the Rocker Switch (power On/Off) to ON. The display shows the factory programmed Total Cycle Time in minutes and seconds (Item A, Figure 7).
2. Press and release the Program button to change the control from OPERATION to PROGRAM mode.
3. To change the Total Cycle Time in minutes, use the UP or DOWN arrow buttons to change the time (Item B, Figure 7).
4. Press and release the Program button again and use the UP or DOWN arrow buttons to change the Total Cycle Time in seconds (Item C, Figure 7).
5. To change the SHO factory settings, make sure the control is in PROGRAM model, then press and hold the two arrow buttons simultaneously for 1-2 seconds and then release. SHO will be displayed (Item D, Figure 7).
6. Press and release the Program button and use the UP or DOWN arrow buttons to change the SHO setting in seconds (Item E, Figure 7).

NOTE: 20 seconds is recommended.

OPERATION (continued)

- Press and release the Program button again and use the UP or DOWN arrow buttons to change the SHO setting in minutes (Item F, Figure 7).

NOTE: 00 minutes is recommended.

- Press and release the Program button again and H2O is displayed (Item G, Figure 7).
- To change the H2O setting, press and release the Program button again to display the setting (Item H, Figure 7). Use the UP or DOWN arrow buttons to increase or decrease the time.

NOTE: Recommended settings are :

- DFW/DFWT/DFWF-250 [0_50]
- DFW/DFWT-150 [0_08]

- Press either the Start/Stop or Operate button to store the changes and to exit the PROGRAM mode.

NOTE: The Start/Stop or Operate button may be pressed at any time during programming to store the changes and exit the PROGRAM mode.

NOTE: If no change is made within 5 seconds at any time during the programming process, all changes made up to that point are stored in memory and the control reverts to the OPERATION mode.

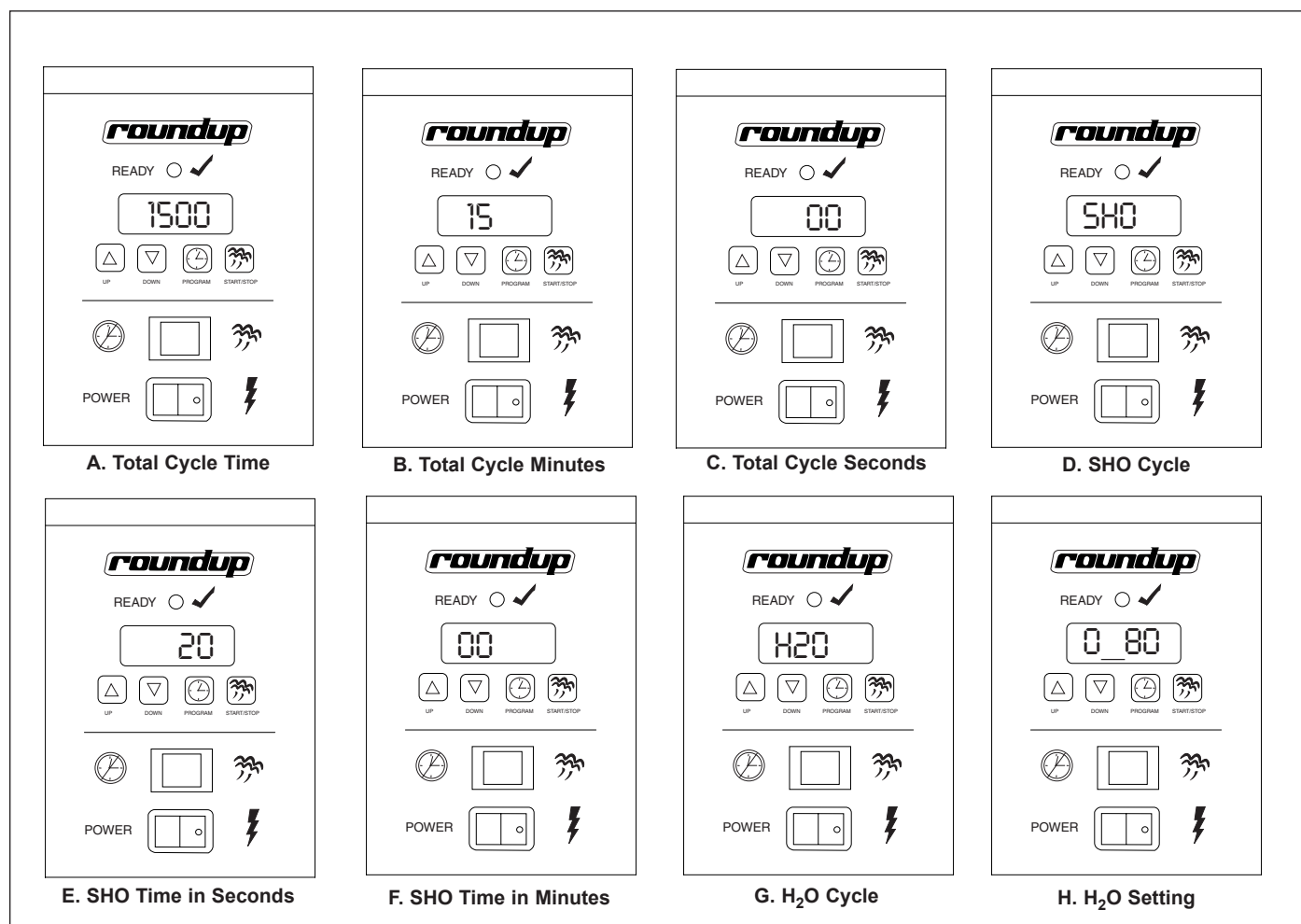


Figure 7. Control Programming Sequence

OPERATION (continued)

Steaming Tips

- Pre-cooked pasta is easily reconstituted and gives you a hot product without the wetness of the normal “dip” method.
- Experiment with your products and different steaming times - a little more or less steam could enhance the appearance/flavor.
- If you serve melted cheese on sandwiches, steam is the perfect way to melt cheese.
- A steamed bun (which takes about 10-15 seconds) says “Hot Sandwich” to your customer.
- Vegetables, rice, and bread products can be reconstituted by steaming before serving, which reduces waste.
- Dinner rolls, muffins, even tortillas can be heated completely and held without drying out the product.
- Use a low plate or pan when steaming to allow full steam penetration and shorter cooking times.
- Use the “1 in 20 rule: Push the operate switch for one second every twenty seconds. This will ensure that the product gets fully heated without using excess water or energy.
- Condensation inside the steamer is normal, but excess moisture indicates too much water is being used. Use the “1 in 20” rule above and check/adjust the programming if needed. See the programming section of this manual.
- Heat meat and bread products apart from each other, then combine in a sandwich. This keeps the meat juices from soaking the bread.
- Clean the top cover gasket as often as possible or at least once a day with a soft, clean cloth.
- Finish off a special meal with a steamed hand towel.

Hi-Limit Reset Button

A hi-limit thermostat will turn off electrical power to the heater if the unit overheats. To reset this thermostat, allow sufficient time (about 45 minutes) for the unit to cool down, remove the cap located on the rear of the unit (Figure 8) and then fully depress the reset button.

If the unit requires continuous resetting, contact your Roundup authorized service agency.

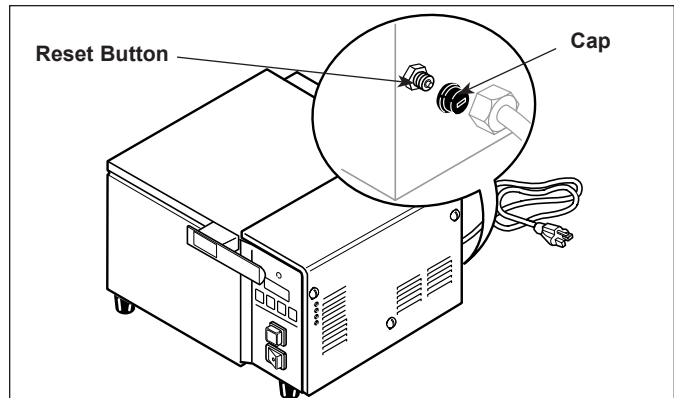


Figure 8. Hi-Limit Reset Button

Diagnostic LEDs (Timer Models) Only

This control board has 4 diagnostic LEDs described below.

Green (Program): When lit, indicates the unit is in Program mode.

Yellow (Audio): When lit, indicates 10-15 VDC is being supplied to the audio signal. The audio signal will sound and the LED will be lit for approximately 3 seconds.

Red (Heat): When lit, indicates the unit is calling for heat by supplying 10-15 VDC to the solid state relay. When off, indicates the generator surface is up to temperature.

Green (H2O): When lit, indicates that 24 VAC is being supplied to operate the solenoid valve used in DFW/DFWT/DFWF-250 units or to the water pump used in the DFW/DFWT-150 units.

NOTE: This LED is only lit for approximately 1 second.

Diagnostic LEDs (Non-Timer Models) Only

This control board has 2 diagnostic LEDs described below.

Yellow (CR2): If lit, indicates the thermistor probe is disconnected or open. The Thermistor should be 100k ohms +/- 2% at room temperature.

NOTE: The unit will not call for heat. This LED should NOT be lit during normal operation.

Red (CR4): When lit, indicates that the unit is calling for heat by supplying 15-20 VDC to the solid state relay. When off, indicates that the generator surface is up to temperature.

OPERATION (continued)

Fault Codes

When the programming parameters for Minutes/Seconds/SHO/H2O have been inadvertently changed to a setting below or above their limits, the unit displays the “ERR” fault code. If this code appears, you must clear these settings using the following procedure:

1. Turn the Rocker Switch (power On/Off) to OFF.
2. Press and hold the Program and the Start/Stop buttons simultaneously.
3. Turn the unit on while holding the buttons.
Release the buttons when the unit stops beeping.

NOTE: Repeat Steps 1 through 4 if the unit still displays the “ERR” fault code.

4. The display will now register 15:00.

NOTE: It is recommended that the SHO and H2O settings be adjusted to the recommended settings

shown in the Programming section of this manual.

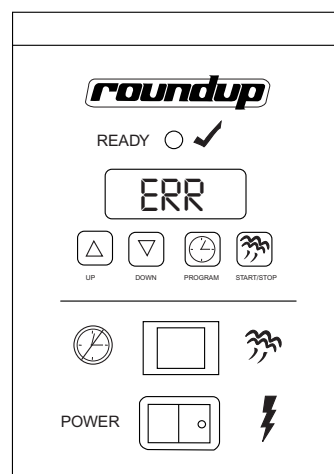


Figure 9. “ERR” Fault Code

MAINTENANCE

⚠ WARNING ⚠

Turn the unit off, disconnect the power source and allow the unit to cool down before performing any service or maintenance on the unit.

⚠ WARNING ⚠

Be sure to follow all of the precautions, procedures, and safety steps listed in the Important Safety Information section of this manual.

NOTE: Frequency of cleaning is determined by water conditions, usage and water filter systems.

⚠ CAUTION ⚠

Do not use a sanitizing solution or abrasive materials. The use of these may cause damage to the stainless steel finish.

⚠ CAUTION ⚠

If a chemical cleaner is used, be sure it is safe to use on cast aluminum. Observe all precautions and warnings on product label.

NOTE: Frequency of cleaning is determined by water conditions, usage and water filter systems.

Daily Maintenance

1. Turn the Rocker Switch (power On/Off) to OFF, unplug the power cord, and allow the unit to cool down before proceeding.

2. Check the Water Pressure Regulator gauge (DFW/DFWT/DFWF-200/250 units only) and verify that it reads 20-25 PSI (1.4 - 1.7 kg/cm² or 138-172 kPa). If not, adjust the water pressure as described in the Installation section of this manual. Check the rear water Quick Disconnect Fitting and Hose Clamp for leakage. Tighten clamps or replace parts if needed.
3. Remove the Trivet and Pan (Figure 10).
4. Wash items in hot, soapy water and then rinse and **WIPE DRY**.
5. Wipe down the Top Cover, Gasket, and the entire exterior of the unit (Figure 10) with a clean, hot, damp cloth (not dripping wet) and wipe dry.
6. Re-install Diffuser, Pan and Trivet.

NOTE: Allow Top Cover to remain open overnight.

Monthly Maintenance

The Deluxe Food Warmer utilizes an open steam generator. Water sprayed onto the generator surface flashes into steam immediately, but the minerals in the water do not steam. They stay on the generator surface. **A small amount of calcium/mineral deposits are needed for proper operation**, but a build-up of excessive calcium/mineral deposits causes poor steaming efficiency, excessive moisture (wet steam), and will eventually severely retard the steaming action completely.

MAINTENANCE (continued)

Cleaning the Spray Tube and Steam Generator

1. Turn the unit off and unplug the power cord. Allow the unit to cool down before proceeding.
2. Perform the Daily Cleaning, but **DO NOT** reassemble the unit.
3. Remove the Spray Tube (Figure 9) by lifting the loose end and pulling it out of the generator hole.
4. Slide the metal cover off of the Spray Tube, take a paper clip and poke out all of the tube's holes. Next, gently fix the tube under running water to wash the deposits out of the loose end. Reattach the cover onto the tube.
5. Use a scraper or spatula to scrape and remove the excessive calcium/mineral buildup from the Generator surface (Figure 10). Remove any loose buildup and thoroughly wipe the Generator with a damp cloth and reassemble the unit.

NOTE: If deposits are still excessive and/or difficult to remove, refer to Steps 1 through 6 below

1. Pour delimer solution (not supplied onto the Generator surface. Follow the delimer manufacturer's instructions for proper mixture and use.

⚠ CAUTION ⚠

If a chemical cleaner is used, be sure it is safe to use on cast aluminum. Observe all precautions and warnings on the product label.

2. Using a sponge or a dry towel, remove the delimer solution from the generator surface and then rinse the surface with clean water.

NOTE: To ensure proper steaming characteristics, some calcium/mineral deposits must be present on the Generator surface. If, during cleaning, the surface does become free of calcium/mineral deposits, add plain tap water to the surface and allow it to boil off. If necessary, repeat this process to formulate a thin coating of calcium/mineral deposits.

NOTE: In soft water areas, it may be necessary to add a small amount of lime to the Generator surface to "Season" it. This will ensure proper steaming characteristics by producing a thin coating of calcium/mineral deposits on the Generator surface.

⚠ CAUTION ⚠
Do not bend the Spray Tube. The tube is made of Teflon® and any bends in the tube will result in permanent damage.

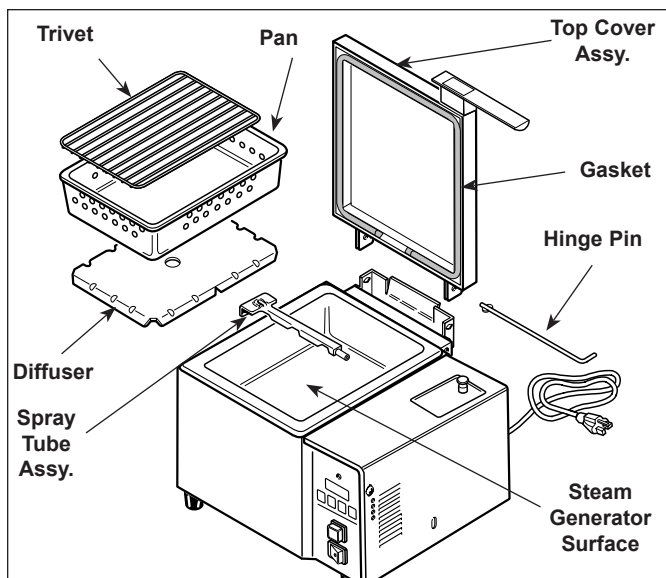


Figure 10. Deluxe Food Warmer Components (DFW-250 Shown)

Seasoning mixture consists of 3/4 ounces (25 ml/ 25 cc) baking soda, 3/4 ounces (25 ml/25 cc) lime mixed with 1 quart (950 ml/950 cc) of water. Stir mixture and pour 1/4" deep onto the hot Generator surface. After mixture is converted to steam, the remaining loose powder can be removed.

3. Plug the power cord into the appropriate outlet.
4. Turn the Rocker Switch (power On/Off) to ON. Allow the unit to warm up for approximately 30 minutes.
5. Push and release the Operate button several times to operate the steamer. This purges any remaining delimer residue from the Generator surface.
6. Turn the unit off, reinstall all parts and accessories, and return the unit to service.

MAINTENANCE (continued)

NOTE: Failure to properly clean and dry the above mentioned items may result in the accumulation of water/moisture overnight. This may lead to permanent damage to the equipment's finish and its accessories. This damage is not covered by warranty.

Water Tank Filter (Models DFW/DFWT-100/150 Only)

The Water Tank Filter is used to prevent particles or food products from entering and damaging the water pump. The unit uses a water filter (Figure 12). Inspect and clean this filter monthly or more regularly using the following procedure.

1. Turn the Rocker Switch (power On/Off) to OFF. Unplug the power cord and allow the unit to cool down before proceeding.
2. Open the Slide Door (Figure 11).
3. Remove the Filter, located inside the tank, by pulling it upwards and out of the bottom hole.

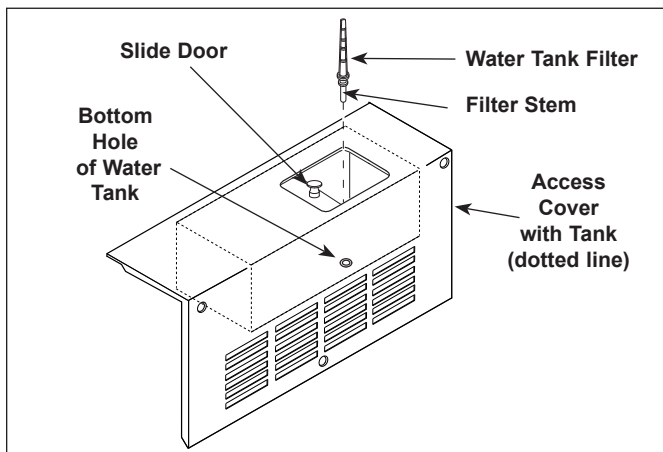


Figure 11. Water Tank Filter

4. Clean the Filter by running it under tap water. Replace the Filter if the screen is torn or damaged.
5. Reinstall the filter stem into the bottom hole of the tank (Figure 11).
6. Fill the Water Tank and test the unit.

Checking and Cleaning the Water Strainer (Monthly) DFW/DFWT/DFWF-200/250 Only

The Water Strainer protects your equipment from any foreign debris in the water line that could damage the unit's solenoid (causing the unit to leak/flood)

To ensure proper and consistent steaming results, visually check the Water Pressure Regulator Gauge (figure 12) and Strainer Cup regularly. If the pressure on the Gauge has dropped, visually check the clear, plastic Strainer Cup and clean out the accumulated debris as follows:

1. Shut off the water supply valve to the unit, unscrew the clear, plastic Strainer Cup, and carefully remove the mesh Strainer Screen.
2. At the sink, gently flush all of the accumulated debris from the Strainer Cup and mesh Strainer Screen. Be especially careful not to damage the mesh Strainer Screen.
3. Carefully place the mesh Strainer Screen into its seat at the bottom of the clear, plastic Strainer Cup and confirm that the orange O-ring is properly seated in its place before screwing the Strainer Cup and top back together.
4. Purge the air out of the Strainer and tubing by disconnecting the male quick disconnect insert from the equipment and, over a bucket, push the "white" plastic tip in until there is good water flow.

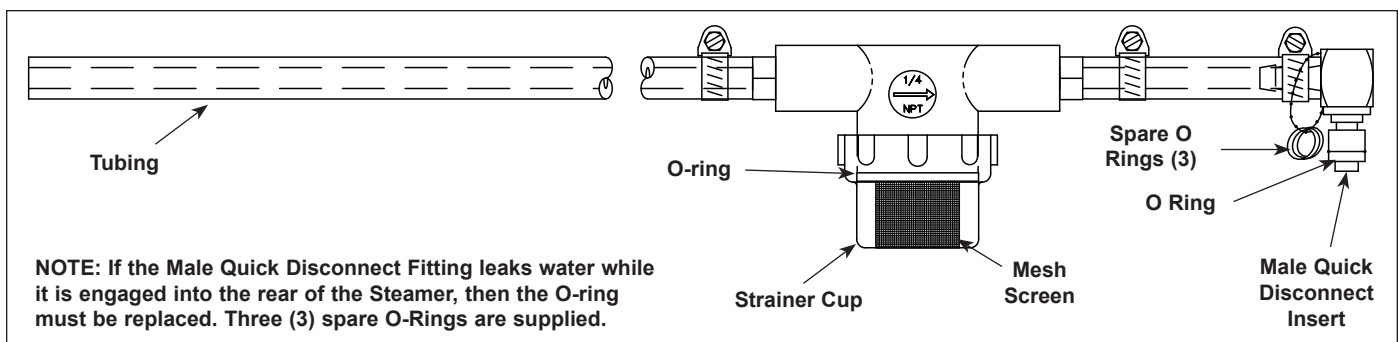


Figure 12. Inlet Hose Assembly

MAINTENANCE (continued)

5. Replace damaged or worn parts as needed.
6. Verify that the Water Pressure Regulator is set to 20-25 PSI (1.4-1.7 kg/cm² or 138-172 kPa).

TOP COVER ADJUSTMENT

It is normal for a small amount of steam to escape around the front and sides of the Top Cover. However, excessive steam may indicate the Top Cover Gasket is worn and/or the cover is out of adjustment or damaged.

1. With the Top Cover closed, loosen the four (4) rear hinge bracket screws (Figure 12) one turn only.
2. Push down on the top cover heavily (Figure 12). This ensures the gasket is seated squarely around the generator. While maintaining the downward pressure, re-tighten the screws.

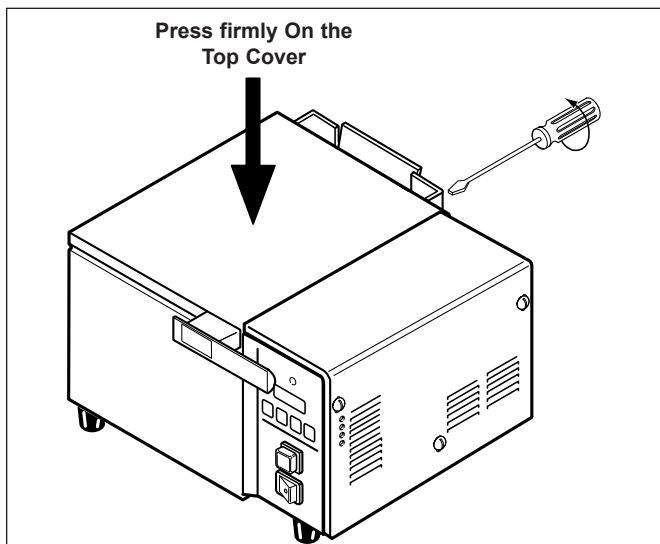


Figure 12. Top Cover Adjustment

MAINTENANCE (continued)**Technical Theory of Operation (Timer Models Only)**

When the Rocker Switch (power On/Off) is on, line voltage flows to the primary side of the step down transformer. The transformer's secondary side supplies 12 and 24 VAC to the Control Board.

Once powered, and provided that the generator temperature is below 380° F (193° C), the Control Board calls for heat by supplying 10-15 VDC to the solid state relay terminals 3 (+) 4 (-). Once powered, the relay closes terminals 1 and 2, which allows line voltage to flow to the generator

As the generator begins to heat up, a type K thermocouple monitors the internal generator temperature. As the heat continues to increase, so does the thermocouple's DC millivolts. Once the generator's temperature rises to 380 - 420° F (193 - 215° C), the thermocouple is generating approximately 7.5 - 9.0 DC millivolts.

The Control Board receives these millivolts and proceeds to remove the 10 - 15 VDC to the Solid State Relay since the heating circuit is satisfied. The relay terminals 1 and 2 open, and the generator stops heating.

When the Operate or the Start/Stop button is pressed, the Control Board is signaled to supply 24 VAC to the solenoid valve (used in the DFW/DFWT/DFWF-250) or the water pump (used in the DFW/DFWT-150) for a split second.

The solenoid valve opens, or the water pump runs, and allows a shot of water (approximately 25 ml or 3/4 oz.) to flow through the spray tube and onto the generator surface for steaming. The steam rises through the perforated pan and steams the product.

NOTE: If the display is in a "Timed Cycle" (Counting Down), the Control Board will continue to activate the solenoid valve or water pump for repeated shots of water, once every 20 seconds, and for the duration of the cycle time displayed. See the Programming section of this manual for more information.

The Control Board's parameters can be custom programmed for the overall cycle steam time (CYC), as well as the interval time in seconds (SHO) when each shot of water occurs, and also the water volume (H2O) used per each shot of water. This Control Board also incorporates four diagnostic LEDs (See the Operation section of this manual).

An audio signal will sound for three seconds at the end of a Timed Cycle. If the heating circuit continues to call for heat and the Generator overheats, a manual resettable Hi-Limit Thermostat will trip and open the generator circuit.

Technical Theory of Operation (Non-Timer Models Only)

When the power switch is on, line voltage flows to the primary side of the step down transformer. The transformer's secondary side supplies 24 VAC to the Control Board's terminals T1 and T2.

Once powered, and provided that the generator temperature is below 380 F (193 C), the Control Board calls for heat by supplying 15-20 VDC to the Solid State relay terminal 3 (+) 4 (-). Once powered, the relay closes terminals 1 and 2, which allows line voltage to flow to the generator.

As the generator begins to heat up, a 100 K Ohm thermistor monitors the internal generator temperature. As the heat continues to increase, the thermistor's ohms begin to decrease. Once the generator's temperature rises to 380-420 F (193-215 C), the thermistor is generating approximately 800-500 ohms. .

The Control Board reads these ohms and proceeds to remove the 15-20 VDC to the Solid State Relay since the heating circuit is satisfied. The Relay terminals 1 and 2 open, and the Generator stops heating.

When the Operate button is pressed for one second, it supplies 24 VAC to the solenoid valve used in the DFW/DFWT-200 or the Water Pump used in the DFW/DFWT-100 for a split second.

The solenoid valve opens, or the Water Pump runs, and allows a shot of water (approximately 25 ml or 3/4 oz.) to flow through the Spray Tube and onto the Generator surface for steaming. The steam rises through the perforated pan and steams the product.

This Control Board incorporates 2 diagnostic LEDs (see the Operation section of this manual). If the Heating Circuit continues to call for heat and the Generator overheats, a manual resettable Hi-Limit Thermostat will trip and open the Generator circuit.

STEAMING GUIDE

COOKING GUIDE	MINUTES	COOKING GUIDE	MINUTES
NOODLES AND RICE			
Macaroni, Small Elbow or Shell (2 qt. cooked, 1 pt. water, 2 oz. oil)	5	Tortilla, Corn shot of steam wait 20-30 seconds	
Egg Noodles (2 qt. cooked, 1 pt. water, 2 oz. oil)	6-7	Tortilla, Flour shot of steam wait 20-30 seconds	
Rice, Converted or Regular (1 lb. with 1 qt. hot water)	20	MEAT	
Rice, Brown (1 lb. with 1 1/2 qt. water)	45	Bratwurst, 6 (4 oz. ea.)	10
Spaghetti (2 qt. cooked, 1 pt. water, 2 oz. oil)	5	Frankfurters, 10 (1.6 oz. ea.)	3
Spaetzle (2 qt. cooked, 1 pt. water, 2 oz. oil)	3-5	Frankfurters, 8 (2 oz. ea.)	4
CEREALS		Frankfurters, 6 (2.7 oz. ea.)	5
Farina, Quick (3/4 cup dry cereal with 1 qt. hot water)	5	Ham Steak, 4 Cooked, Frozen (4 oz. ea.)	4-5
Grits, Instant (1 lb. dry cereal with 1 1/2 qt. hot water)	3	Hamburgers, 4 Cooked, Frozen (4 oz. ea.)	7
Grits, Quick (1 lb. dry cereal with 2 qt. hot water)	10	Hamburgers, 4 Raw, Frozen (4 oz. ea.)	10-11
Oatmeal (2 qt. cooked, 1 cup water optional)	6	Ribs, 4 Cooked (5 oz. ea.)	10
BREADS		Sausage, 16 Link, Cooked (1 oz. ea.)	8-10
Bagels, 4 (3 oz. ea.)	3	SEAFOOD	
Cloverleaf Rolls, 6 (1 oz. ea.) shot of steam wait 20-30 seconds		Alaskan King Crab Legs (1 lb.)	4-5
Dinner Rolls, 6 (1 oz. ea.) shot of steam wait 20-30 seconds		Clams, 6 (to open) shot of steam	
Hamburger Buns, 4 (2 1/2 oz. ea.) shot of steam wait 20-30 seconds		Red Snapper, 4 (6 oz. ea. Fillets)	5-7
Hot Dog Buns, 5 (2 oz. ea.) shot of steam wait 20-30 seconds		Rock Lobster Tails, 5 (8 oz. ea.)	8
Hard Rolls, 4 (1 1/2 oz. ea.)	2	Rock Lobster Tails, 5 Frozen (8 oz. ea.)	16
Hoagie Buns, 3 (2 oz. ea.)	2	Rock Lobster Tails, 4 (10 oz. ea.)	10
Italian Bread, 3 (2 1/2 oz. ea.) shot of steam wait 20-30 seconds		Rock Lobster Tails, 4 Frozen (10 oz. ea.)	20
Kaiser Rolls, 4 (2 1/2 oz. ea.)	1 1/2	Sea Scallops, 1 lb.	5-8
Onion Buns, 4 (2 oz. ea.) shot of steam wait 20-30 seconds		Shrimp, Green Headless, 20 (1 oz. ea.)	6
Tamale, 7 (3 oz. ea.)	5	Shrimp, Peeled, De-veined, 1 lb.	5-6
Tamale, 7 Frozen (3 oz. ea.)	10	Shrimp, Peeled, De-veined, Frozen 1 lb.	8-9
		Turbot Steaks, 3 (8 oz. ea.)	5
		POULTRY	
		Chicken, 4 Quarter, (10 oz. ea.)	23-25
		Chicken, 2 Half (1 1/2 lb. ea.)	25
		Chicken Supreme, 6 Frozen,	30
		Pillow Pack (4 oz. ea.)	
		Chicken or Turkey Roll, 2 lb. 5/8 in. Cubes, IQF	7
		Rock Cornish Game Hens, 2 Whole (26 oz. ea.)	25
		Rock Cornish Game Hens, 4 Half (13 oz. ea.)	15

STEAMING GUIDE (continued)

COOKING GUIDE	MINUTES	COOKING GUIDE	MINUTES
EGGS			
Soft Boiled, 8 (In Shell)	6	Cauliflower, Whole (1 lb.)	13-20
Hard Boiled, 8 (In Shell)	15	Cauliflower, Florettes, Frozen (2 lb.)	14-18
Poached, 8	3	Corn, Whole Kernel, Frozen (1 1/4 lb.)	4
Scrambled, 1 qt.	5	Green Beans, Whole (1 lb.)	15-17
VEGETABLES		Green Beans, Whole, Frozen (1 1/2 lb.)	13-14
Artichokes, 4 Whole (5 oz. ea.)	20-22	Green Beans, Cut, Frozen (1 1/4 lb.)	10
Asparagus, Spears (1 lb.)	11-14	Greens, Chopped, Frozen (1 lb.)	40-45
Asparagus, Spears, medium, Frozen (2 1/2 lb.)	15-17	Lima Beans, Frozen (1 1/4 lb.)	12-15
Broccoli, Cuts (1 lb.)	12-14	Okra, Whole, Frozen (1 lb.)	10-15
Broccoli, Cuts, Frozen (1 1/4 lb.)	13-14	Parsnips, Sliced (1 lb.)	8-10
Broccoli, Spears (1 lb.)	15-20	Peas, Frozen (1 1/2 lb.)	8
Broccoli, Spears, Frozen (2 lb.)	17-18	Potatoes, 8 Whole (3 oz. ea.)	25
Brussel Sprouts, Frozen (1 3/4 lb.)	13-14	Potatoes, Mashed (2 qt.)	8
Cabbage, 6 3 in. Wedge (oz. ea.)	15	Spinach, Chopped, Frozen (3 lbs.)	25
Carrots, Sliced (1 lb.)	12	Squash, Acorn, 4 (8 oz. pcs.)	15-20
Carrots, Whole Baby, Frozen (2 lb.)	15-20	Squash, Winter, Puree, Frozen (1 1/2 lb.)	12-15
		Squash, Zucchini, Sliced, Frozen (1 1/4 lb.)	10

NOTE: The steaming times above are approximate and will vary based on the quality of product.

TROUBLESHOOTING
⚠ WARNING ⚠

To avoid possible personal injury and/or damage to the unit, inspection, test and repair of electrical equipment should be performed by qualified service personnel. The unit should be unplugged when servicing, except when electrical tests are required.

If the troubleshooting steps listed do not solve your machine problem, contact a Roundup Authorized Service Agency for further assistance or service.

Problem	Possible Cause	Corrective Action
Control Display is blank (Rocker Switch is ON but indicator light is off) Timer Models Only.	The power cord is not correctly plugged in.	Plug the power cord into the appropriate outlet.
	The power cord and/or electrical plug is damaged.	Inspect electrical wire, plug, and receptacle.
	The main electrical panel circuit breaker is off or has tripped.	Reset circuit breaker. Contact your maintenance person or Authorized Service Agency if it trips again.
	Rocker Switch (power On/Off) is inoperable.	Contact your maintenance person or Authorized Service Agency for service.
Control Display is blank (Rocker Switch is ON and indicator light is on). Timer Models Only	Control Board is inoperable.	Contact your maintenance person or Authorized Service Agency for service.
	Transformer is inoperable.	
	Loose, burnt, or broken wires in circuit.	
Unit does not heat up (Rocker Switch is ON and indicator light is on).	Hi-Limit Thermostat is tripped or inoperable.	Reset the Hi-Limit Thermostat according to the Operations section of this manual. If the Hi-Limit Thermostat requires continuous resetting, contact your Authorized Service Agency for service.
	Transformer is inoperable.	
	Solid State Relay is inoperable	
	Thermocouple is inoperable (Timer Models Only).	
	Control Board is inoperable.	
	Steam Generator is inoperable.	
	Loose, burnt, or broken wires in circuit.	
	Thermistor is inoperable (Non-Timer Models Only).	
The unit's main electrical panel circuit breakers trips.	Damaged receptacle, plug, or cord or a loose connection or an internal component failure.	Turn the unit off, allow it to cool to room temperature, and then restart the unit. Contact your maintenance person or Authorized Service Agency if the condition repeats.
	Circuit breaker is overloaded.	
Water leaking inside electrical housing.	Pinhole leak in robber hoses (DFW/DFWT-100/150).	Replace hoses.
	Loose or damaged water line tubes and/or fittings inside electrical housing.	Tighten or replace tubes and/or fittings.
Water leaking at Male Quick Disconnect fitting while it is engaged into steamer (DFW/DFWT/DFWF-200/250)	The O-ring on the Male Quick Disconnect is damaged.	Replace O-ring. Refer to the Maintenance section of this manual (Figure 12).

TROUBLESHOOTING (continued)

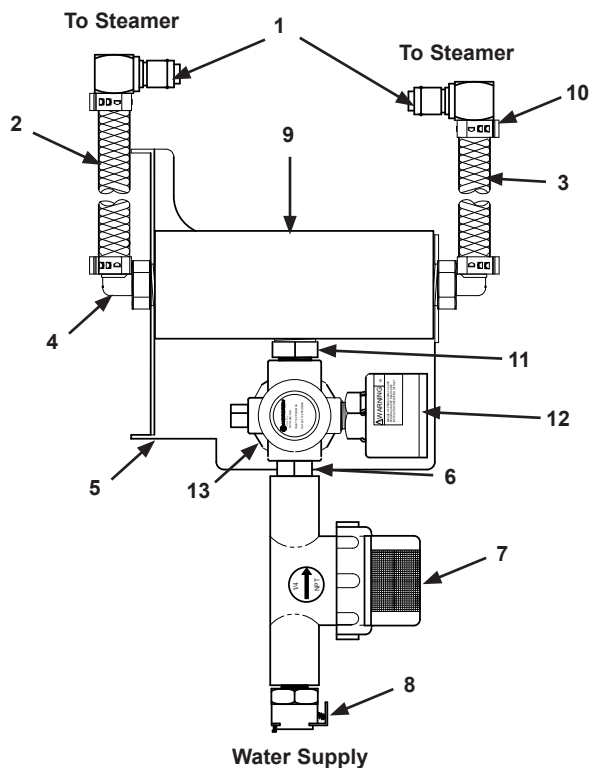
Problem	Possible Cause	Corrective Action
“ERR” appears on the Control Display (Timer Models only)	Programming and or SHO and H2O values were adjusted/changed improperly (Timer Models Only).	Reset the Control Board as described in the Programming section of this manual. See Fault Codes.
Unit heats but there is little or no steam produced and/or The product requires more steaming than usual.	Water Line Valve is closed (DFW/DFWT/DFWF-200/250).	Check that the Water Line Valve is open.
	Filter Strainer and/or spray tube is restricted.	Check and clean the Filter Strainer and Spray Tube as described in the Maintenance section of this manual.
	Quick Disconnect is not fully engaged at the rear of the unit or is damaged (DFW/DFWT/DFWF-200/250).	Remove and re-engage the Quick disconnect firmly until a “click” is heard. Replace if damaged.
	Low or no water pressure in the water line (DFW/DFWT/DFWF-200/250).	Remove the Quick Disconnect Insert from the rear of the unit. While holding over an empty cup, press the “white” plastic tip. Strong, steady water flow should be noted. If so, re-engage firmly into unit. If not present or pressure is low, contact your maintenance person or plumber.
	Improper water pressure to unit (DFW/DFWT/DFWF-200/250).	Verify that a Water Pressure Regulator is installed and set to 20-25 psi.
	Unit is not being cleaned properly (daily/monthly).	Clean the unit daily and monthly as described in the Maintenance section of this manual.
	Programming and/or SHO , H2O values were adjusted/changed improperly (Timer Models only).	Reprogram the SHO and H2O values as described in the Programming section of this manual.
	Insufficient or excessive calcium/mineral deposits on the Generator surface.	Verify that a thin layer of calcium/mineral deposits is present on the Generator surface. Refer to the Maintenance section of this manual.
	Generator surface is bare.	The Generator surface must have a thin coating of calcium/mineral deposits for proper steaming. Refer to the Maintenance section of this manual.
	The Water Pump’s rubber hoses are pinched or kinked (DFW/DFWT-100/150).	Straighten and reposition the rubber hoses.
	Top Cover Gasket is worn and/or cover is out of adjustment.	If noticeable steam escapes around the Cover, replace the gasket and/or adjust the Cover according to the Maintenance section of this manual.
	Generator Diffuser is missing.	Install Generator Diffuser or replace if missing.
	Generator surface temperature is too low	Verify that the Generator surface temperature is 380° - 420° F (193 - 215° C)..

TROUBLESHOOTING (continued)

Problem	Possible Cause	Corrective Action
Excessive Condensation in Food Compartment.	Water pressure is too high (DFW/DFWT/DFWF-200/250).	Verify that the Water Pressure Regulator is set to 20 - 25 PSI. Adjust accordingly.
	Programming and or SHO and H2O values were adjusted improperly (Timer Models only).	Reprogram the SHO and H2O values as described in the Programming section of this manual.
Excessive Steam escapes from front or sides of Steamer.	Worn or damaged Top Cover Gasket.	Replace Top Cover Gasket.
	Top Cover out of adjustment.	Adjust Top Cover according to the Maintenance section of this manual.
Steam Generator's surface becomes flooded (fills with excess water).	Insufficient pre-heat time.	Remove excess water from the Generator surface and allow the unit 30 minutes of pre-heat time.
	The Green Momentary Switch is pressed for longer than 1 second.	Follow the "one in twenty" rule. Refer to the Operation section of this manual.
	Water Pressure Regulator is not installed (DFW/DFWT/DFWF-200/250).	Verify that a Water Pressure Regulator is installed and set to 20 - 25 PSI. Adjust accordingly.
	Water pressure is too high (DFW/DFWT/DFWF-200/250).	Verify that a Water Pressure Regulator is installed and set to 20 - 25 PSI. Adjust accordingly.
	Programming and/or SHO and H2O values were adjusted or changed improperly (Timer Models only).	Reprogram the Control Board to the recommended settings. Refer to the Programming section of this manual.
	Solenoid Valve is leaking due to debris trapped inside the plunger (DFW/DFWT/DFWF-200/250).	Attempt to flush the debris out of the valve by rapidly operating the unit on a number of "single shot" cycles and then letting it rest. If the unit still leaks, disassemble the Solenoid Valve and clean out the plunger. Reassemble the unit and test again. If a leak is still present, replace the Solenoid Valve. Contact your maintenance person or Authorized Service Agency.
	The Water Pump and/or its Check Valves are clogged or damaged.	Verify that the filter is present in the water tank. Disassemble and clean pump. Replace Check valves if damaged.
	Improper Daily/Monthly cleaning.	Follow the Daily/Monthly cleaning procedures carefully.
	The Generator surface temperature is too low.	Verify that the Generator surface temperature is between 380° - 420° F (193 - 215° C).
	Insufficient or excessive calcium/mineral deposits on the Generator surface.	Verify that a thin layer of calcium/mineral deposits is present on the Generator surface. Refer to the Maintenance section of this manual.
	There is no pre-strainer or filter on the water line (DFW/DFWT/DFWF-200/250).	The unit was supplied with a strainer. If missing, install strainer.
	Solenoid Valve is installed incorrectly (DFW/DFWT/DFWF-200/250).	If the Solenoid Valve was replaced, verify that the : "IN" and "OUT" labels on the valve correspond to the water flow.

REPLACEMENT PARTS

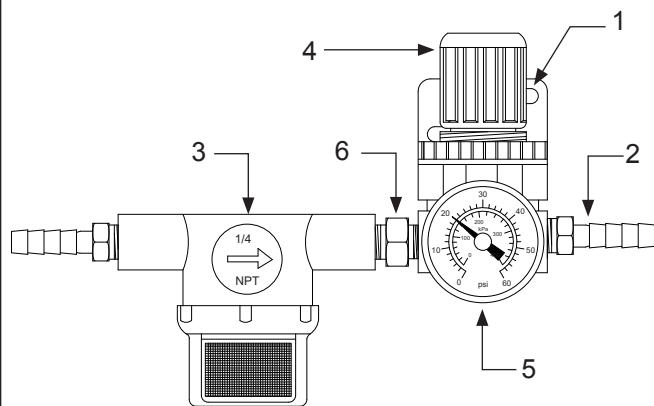
Dual Water Pressure Regulator Kit - Part No. 7000235



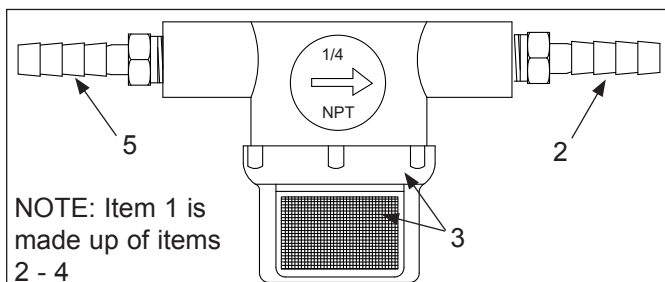
Item	Part No.	Description	Qty.
1	2080105	Elbow, Quick Disconnect - 1/4"	2
2	2030126	Tubing 1/4" I.D. PVC BRD. 24" Long	1
3	2030125	Tubing 1/4" I.D. PVC BRD. 12" Long	1
4	2040150	Elbow, Male - Nylon 1/4" Barb x 3/8" NPT	2
5	0503615	Bracket, Manifold Mtg.	1
6	2190129	Nipple 1/4" NPT x 1/4" NPT	1
7	2090127	Strainer - 1/4" FPT	1
8	2080118	Quick Disconnect - 1/8" NPT	1
9	2190113	Manifold	1
10	2110160	Clamp, Ear Med.	4
11	2040151	Nipple, HEx - 3/8" x 1/4" NPT Nylon	1
12	2170114	Gauge, Water Pressure	1
13	2170113	Regulator, Pressure	1

IMPORTANT: Two adjacent steamers can be fed with a dual water pressure regulator.

Single Water Pressure Regulator Kit - Part No. 7000314



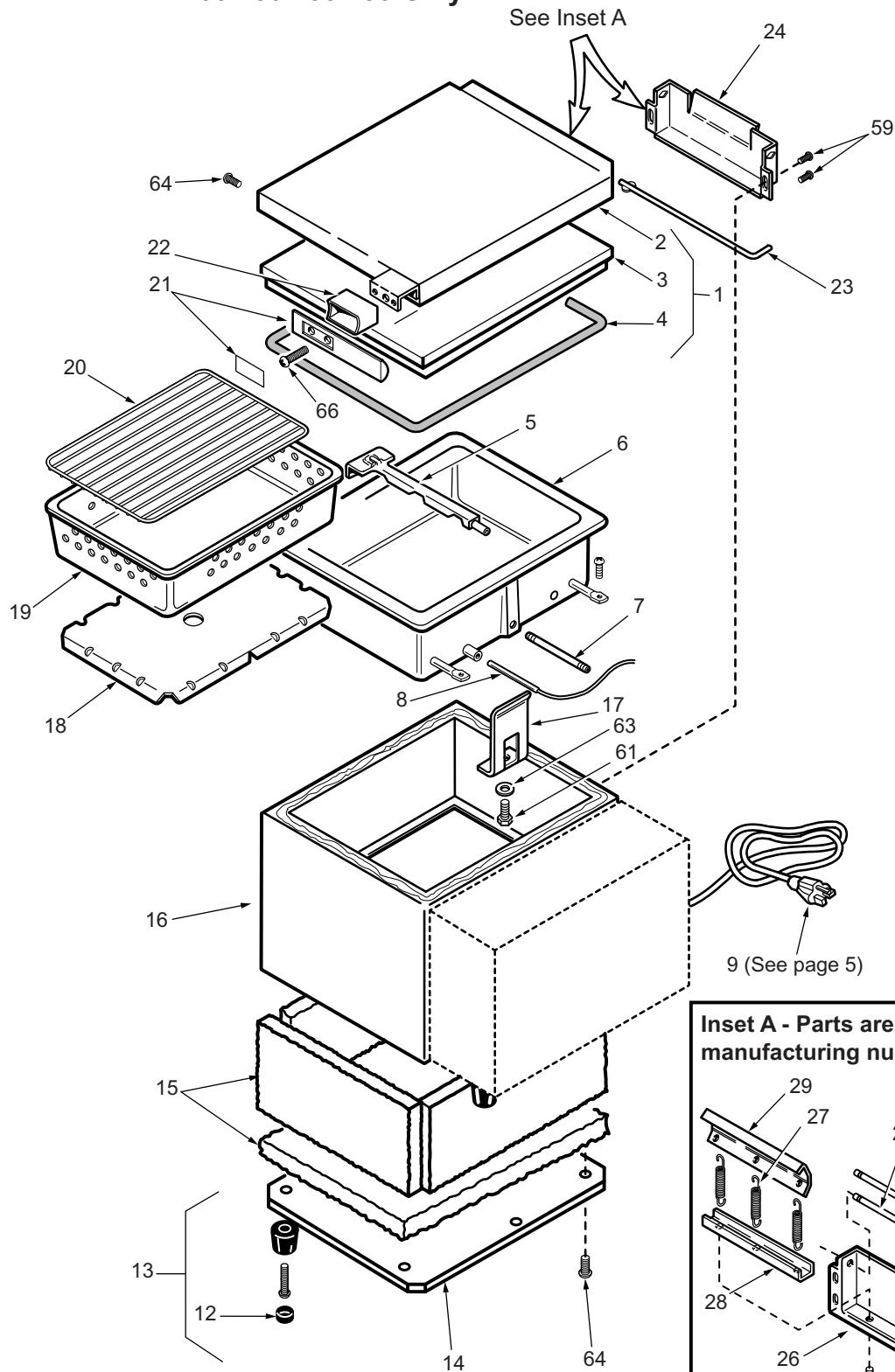
Item	Part No.	Description	Qty.
1	0503849	Bracket	1
2	2040130	Male Adapter, Barbed 1/4"	2
3	See Below for Strainer Parts Identification		
4	2170113	Regulator, Pressure	1
5	2170114	Gauge, Water Pressure	1
6	2190129	Nipple, 1/4" NPT x 1/4" NPT	1
7	2110104	Clamp, Worm (not shown)	2



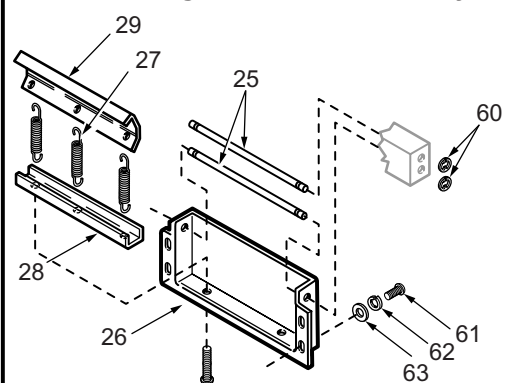
Item	Part No.	Description	Qty.
1	7000333	Water Line Strainer Kit	1
2	2040130	Male Adapter, Barbed 1/4"	2
3	7000334	Replacement Screen and O-ring kit	1
4	2110104	Clamp, Worm (not shown)	2

REPLACEMENT PARTS (continued)

DFW/DFWT - 100/150/200/250 Only

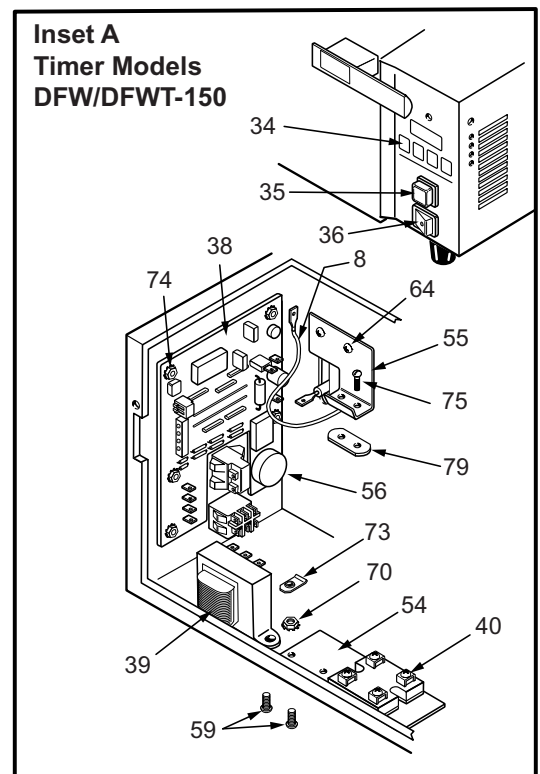
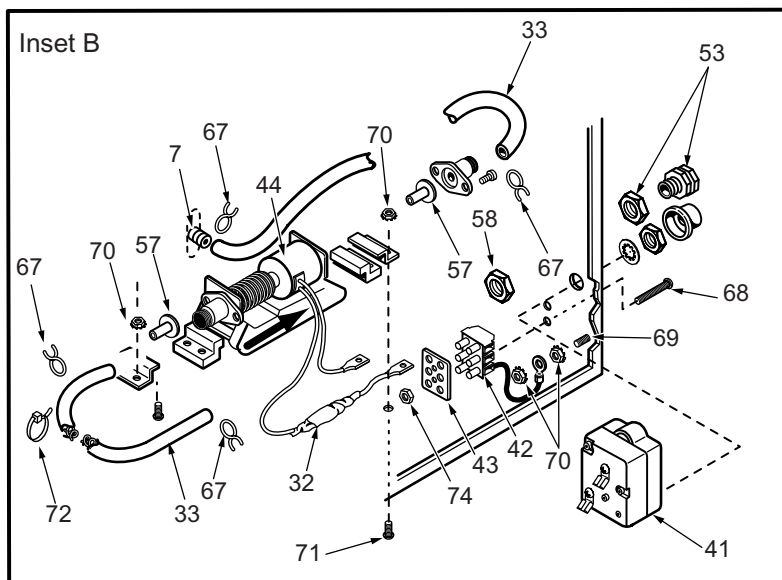
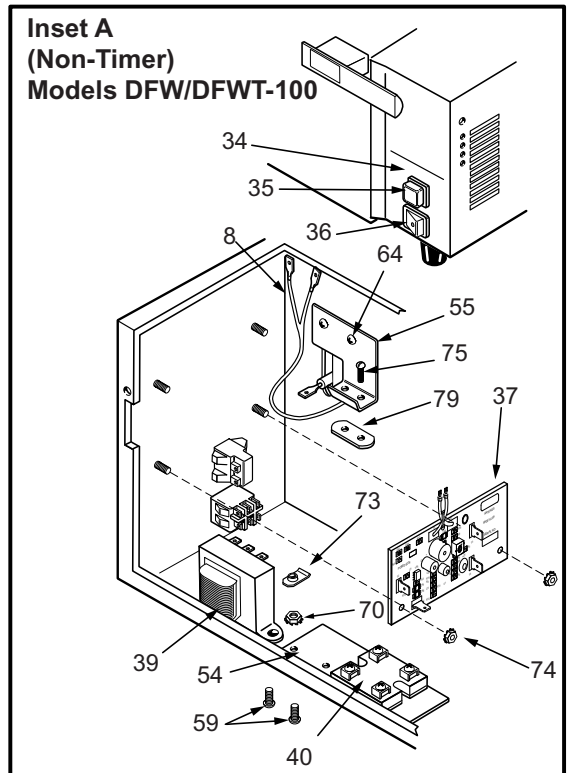
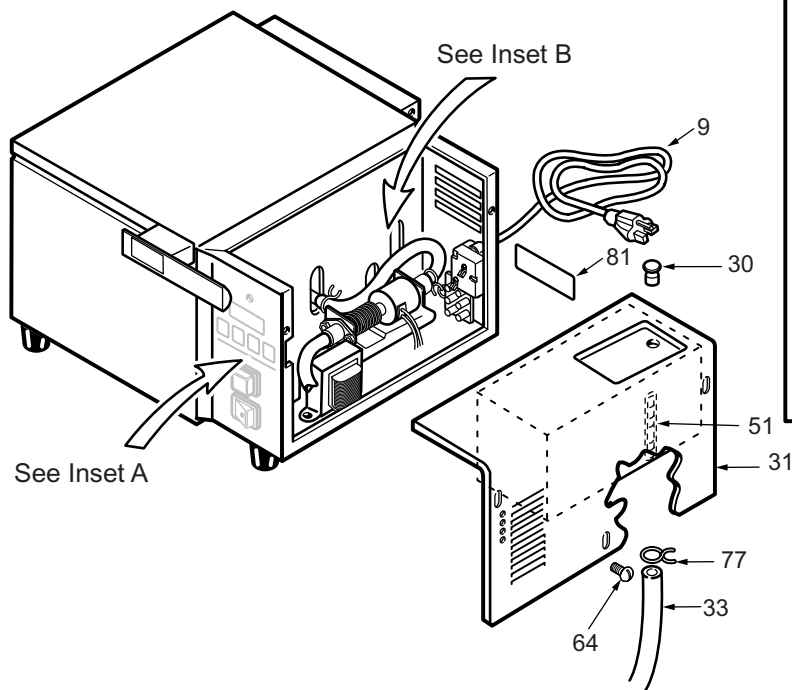


Inset A - Parts are used on DFWT-150 with manufacturing number 9100128 only.



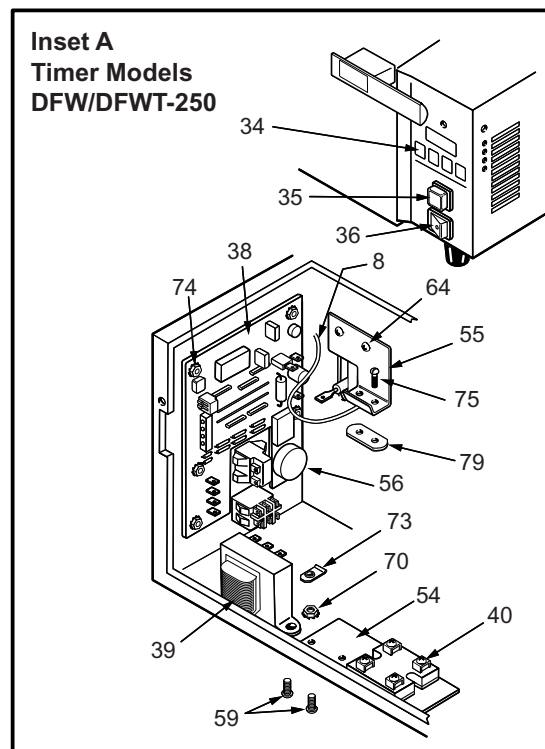
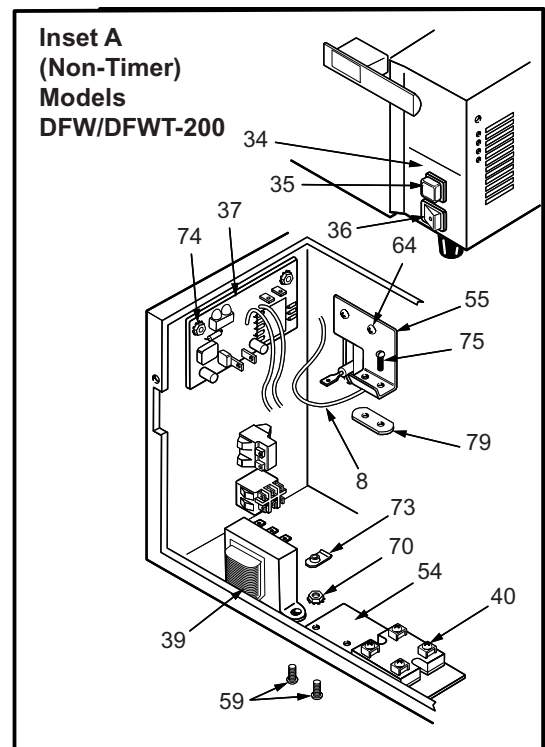
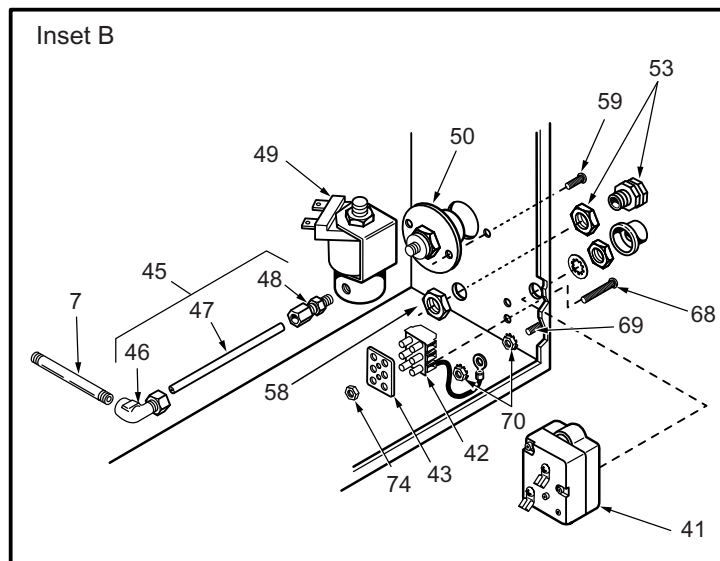
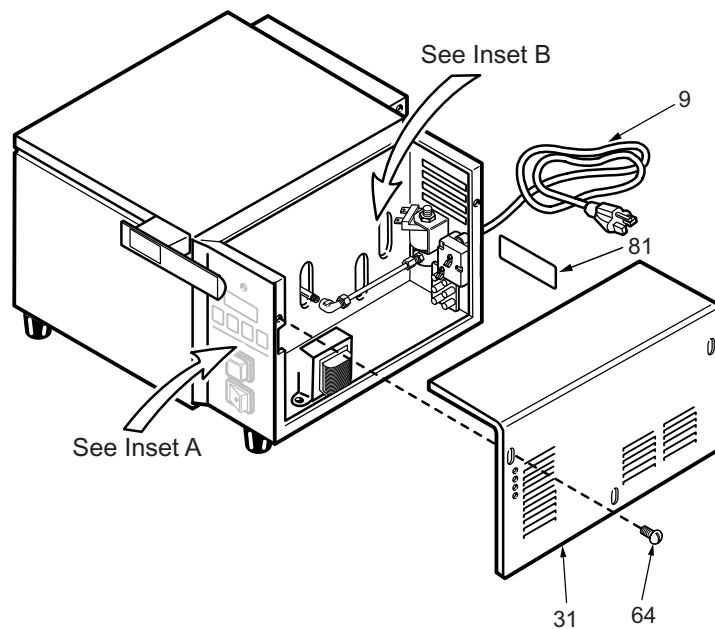
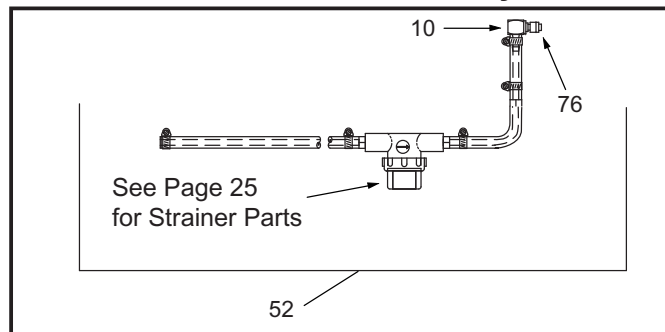
REPLACEMENT PARTS (continued)

DFW/DFWT - 100/150 Series ONLY



REPLACEMENT PARTS (continued)

DFW/DFWT - 200/250 Series Only



REPLACEMENT PARTS (continued)

DFW/DFWT - 100/150/200/250 Series

Item	Part No.	Description	Qty.	Item	Part No.	Description	Qty.
1	0011115	Top Cover Assy. (DFW Series) (Incl. Nos. 2, 3 & 4)	1	18	0503177	Diffuser Pan (DFW Series)	1
	0011154	Top Cover Assy. (DFWT Series) (Incl. Nos. 2, 3 & 4)	1		0503182	Diffuser Pan (DFWT Series))	1
	0011162	Top Cover Assy. (Mfg. # 9100128 only) (Incl. Nos. 2, 3 & 4)	1	19	2130102	Perforated Pan (DFW Series)	1
2	0020578	Shelf, Top Cover (DFW Series)	1		2130103	Perforated Pan (DFWT Series)	1
	0020577	Shelf, Top Cover (DFWT Series)	1	20	0800106	Trivet (DFW Series)	1
	0020453	Shelf, Top Cover (Mfg. # 9100128 only)	1		0800109	Trivet (DFWT Series)	1
3	0021065	Liner, Top Cover (DFW Series)	1	21	7000133	Handle Kit (Incl. Nos. 22 & 66)	1
	0021090	Liner, Top Cover (DFWT Series)	1	22	0020964	Cover, Handle Bracket	1
4	7000122	Gasket, Top Cover (DFW Series)	1	23	0800219	Hinge Pin, Top Cover	1
	7000123	Gasket, Top Cover (DFWT Series)	1	24	0501569	Hinge Base, Top Cover	1
5	0010145	Spray Tube Assy. (DFW Series)	1	25	0800280	Hinge Pin (DFWT Mfg. # 9100128 only)	1
	0010146	Spray Tube Assy. (DFWT Series)	1	26	0502719	Hinge Base (DFWT Mfg. # 9100128 only)	1
6	7000124	Steam Generator, 120 VAC (DFW Series) 1800 Watts	1	27	0600125	Spring (DFWT Mfg. # 9100128 only)	3
	7000147	Steam Generator, 120 VAC, 1500 Watts (DFW Mfg. # 9100102, 105, 112, 115) only	1	28	0020952	Hinge Beam (DFWT Mfg. # 9100128 only)	1
	7000125	Steam Generator, 230 VAC (DFW Series) 2800 Watts	1	29	0502722	Pivot Bracket (DFWT Mfg. # 9100128 only)	1
	7000126	Steam Generator, 120 VAC (DFWT Series) 1800 Watts	1	30	2100170	Knob, Water Tank	1
	7000127	Steam Generator, 230 VAC (DFWT Series) 2800 Watts	1	31	0021063	Access Cover Assy. (100 & 150 Models)	1
7	7000448	Tube, Generator (DFW/DFWT-100 Series) 1/8" x 2-1/2"	1		0503096	Access Cover Assy. (200 & 250 Models)	1
	7000447	Tube, Generator (DFW/DFWT-200 Series) 3-1/4" LG.	1	32	7000214	Diode Assy.	1
8	4050210	Thermistor (Non-Timer Models only)	1	33	7000134	Silicone Tube Kit (Includes 2 tubes)	1
	4050209	Thermocouple (Timer Models only)	1	34	1000976	Label, Front Panel (Non-Timer Models only)	1
9	0700451	Power Cord, 120 VAC, 14/3 5-20P	1		1001036	Label, Front Panel (Timer Models only)	1
	0700463	Power Cord, 120 VAC, 14/3 5-15P	1	35	4010166	Operate Switch	1
	0700453	Power Cord, 230 VAC, CEE 7/7	1	36	4010151	Rocker Switch, Power On/Off, 120 VAC	1
	0700437	Power Cord, 230 VAC, IEC-309	1		4010137	Rocker Switch, Power On/Off, 230 VAC	1
10	7000139	Quick Disconnect, Male	1	37	7000392	Control Board (Non-Timer Models only)	1
12	218P145	Cover, Leg	1	38	7000317	Control Board (Timer Models only)	1
13	210K230	Leg, 1" (Pack of 4)	1	39	7000319	Transformer	1
14	0503069	Base Plate (DFW Series)	1	40	405K125	Relay, Solid State	1
	0503178	Base Plate (DFWT Series)	1	41	7000135	Hi-Limit Thermostat	1
15	7000131	Insulation Kit (DFW Series)	1	42	7000136	Terminal Block Kit (Incl. No. 43)	1
	7000132	Insulation Kit (DFWT Series)	1	43	100P967*	Marking Label	1
16	0021055	Main Housing (DFW Series)	1	44	7000137	Water Pump Kit, 24 VAC (Incl. No. 32 & 33)	1
	0021072	Main Housing (DFWT Series)	1	45	7000142	Outlet Tube Kit (Incl. Nos. 46, 47 & 48)	1
	0021092	Main Housing (DFWT Mfg. #9100128)	1	46	204P114*	Elbow, Female, 1/4" Tube	1
17	0503174	Retainer, Generator	2	47	2000188	Outlet Tube	1

REPLACEMENT PARTS (continued)
DFW/DFWT - 100/150/200/250 Series

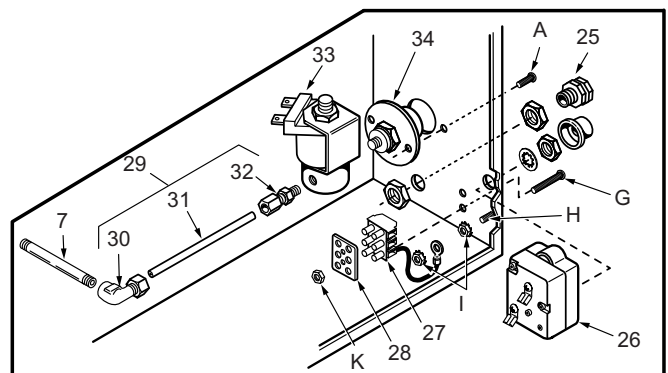
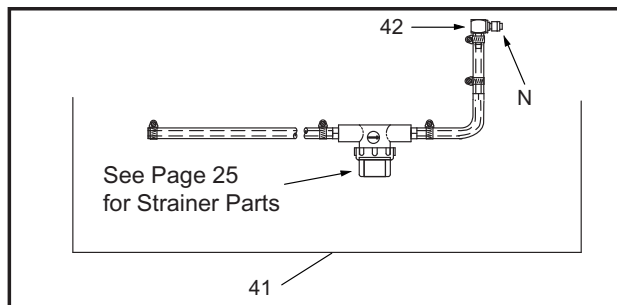
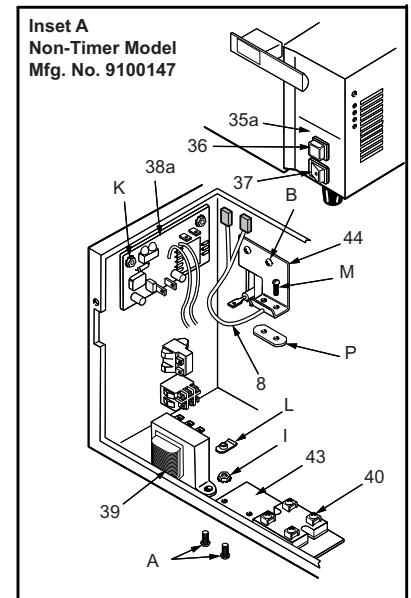
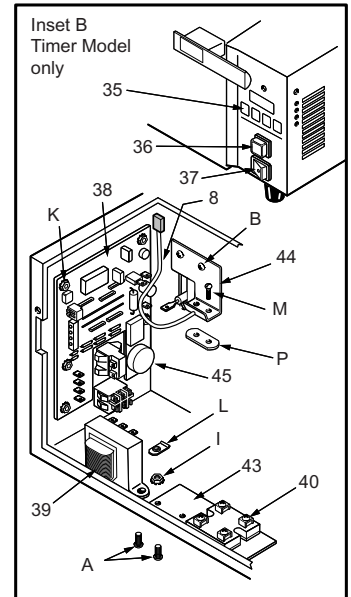
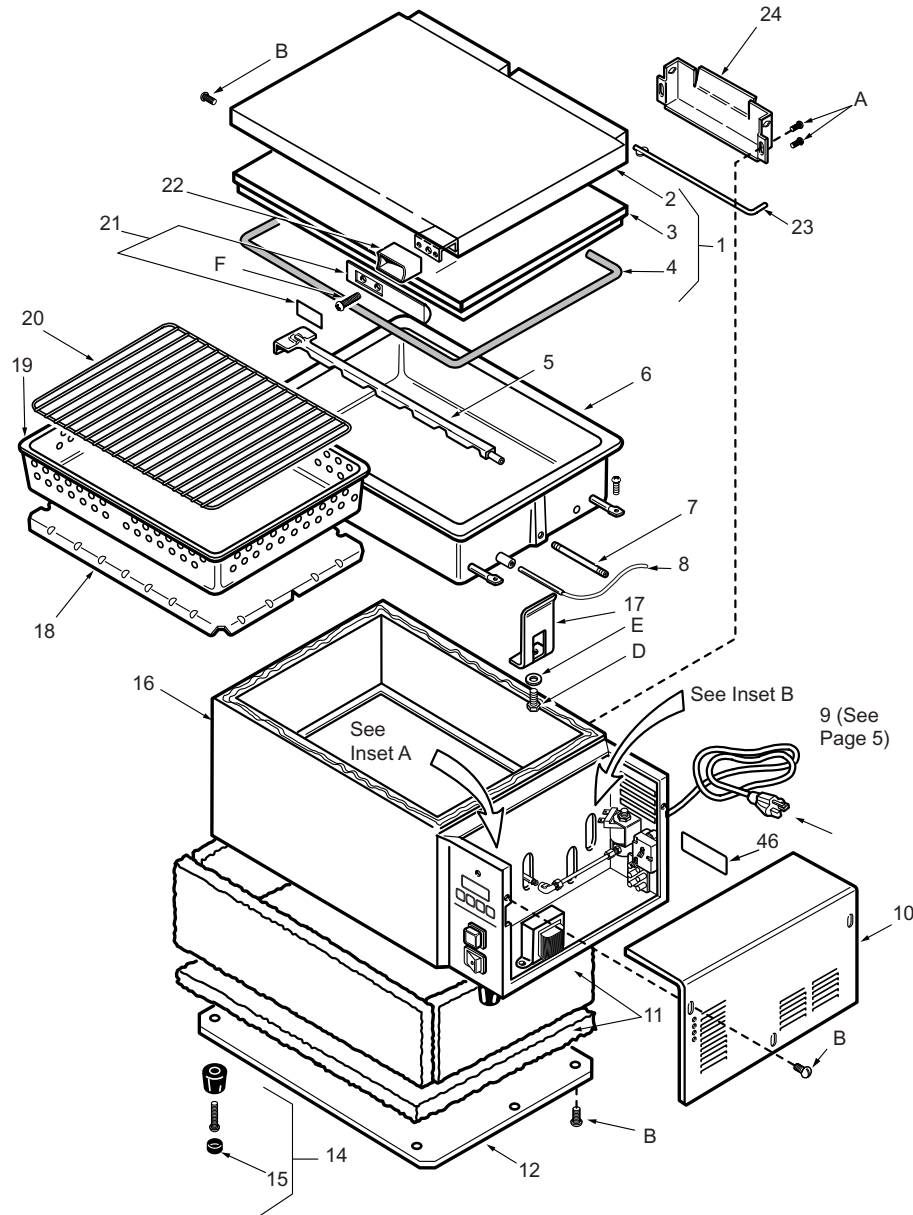
Item	Part No.	Description	Qty.
48	2040103	Connector, Male, 1/4" Tube	1
49	4040145	Solenoid, 24 VAC	1
50	7000138	Quick Disconnect Body & Plate Kit	1
51	0010159	Filter Assy., Water Tank	1
52	0010584	Inlet Hose Assy. with Strainer	1
53	040K251	Strain Relief	1
54	0011251	Relay Heat Sink	1
55	0503333	Bracket, Temperature Sensor	1
56	7000156	Audio Alarm Kit	1
57	7000170	Check Valve Kit, Discharge & Intake	1
58	040P138*	Locknut, Conduit, 1/2"	1
59	308P104*	Screw, #8-32 x 3/8", SS	1
60	211P127*	Retaining Ring	1
61	325P109*	Screw, Hex	1
62	325P154*	Lockwasher	1
63	325P104*	Washer, Flat	1
64	308P103*	Screw, #8-32 x 1/4", SS	1
65	308P164*	Screw, #8-32 x 1", SS	1

Item	Part No.	Description	Qty.
66	308P132*	Screw, #8-32 x 3/4", Flat, SS	1
67	211P103*	Hose Clamp, 1/2" Dia.	1
68	306P123*	Screw, #6-32 x 7/8", SS	1
69	308P124*	Screw, #8-32 x 1/2", 1-Way, SS	1
70	308P143*	Nut, Hex, #8-32 KEPS	1
71	308P108*	Screw, #8-32 x 3/4", SS	1
72	406P107*	Cable Tie	1
73	300P102*	Nut, Tinnerman, U-type	1
74	306P130*	Nut, Hex, #6-32 KEPS	1
75	306P103*	Screw, #6-32 x 3/8", SS	1
76	020P117*	O-Ring	1
77	211P101*	Hose Clamp, 3/8" Dia.	1
78	306P104*	Screw, #6-32 x 1/4", SS	1
79	301P106*	Nut, Spotweld, #6-32	1
80	304P105*	Nut, Hex, #4-40 KEPS	1
81	1000275	Label, Water & Waste Connection	1

** Only available in packages of 10.*

REPLACEMENT PARTS (continued)

DFWF - 250 Only



REPLACEMENT PARTS (continued)

DFWF-250 Only

Item	Part No.	Description	Qty.
1	0011165	Top Cover Assy. (includes items 2, 3, & 4)	1
2	0020769	Top Cover Shell	1
3	0021094	Top Cover Liner	1
4	7000140	Top Cover Gasket Kit	1
5	0010147	Spray Tube Assy.	1
6	7000220	Steam Generator, 230 VAC	1
	7000221	Steam Generator, 208 VAC	1
7	7000447	Steam Generator Tube	1
8	4050209	Thermocouple (Timer Models Only)	1
8a	4050210	Probe Thermistor (Non-timer Models) Mfg. No. 9100417	1
9	0700452	Power Cord (6-20P)	1
	0700453	Power Cord (CEE 7/7)	1
10	0503102	Access Cover	1
11	7000141	Insulation Kit	1
12	0503103	Base Plate	1
14	210K230	Leg 1 inch (Pack of 4)	1
15	218P145*	Cover, Leg	1
16	0021095	Main Housing	1
17	0503186	Generator Retainer	2
18	0503187	Diffuser Pan	1
19	2130171	Pan Perforated, Full Size	1
20	0800113	Trivet	1
21	7000133	Handle Kit (includes Item 22)	1
22	0020964	Handle Bracket Cover	1
23	0800219	Top Cover Hinge Pin	2
24	0501569	Top Cover Hinge Base	2
25	040K251	Strain Relief	1
26	7000135	Hi-Limit Thermostat	1
27	7000136	Terminal Block Kit (includes Item 28)	1
28	100P967*	Marking Label	1
29	7000142	Outlet Tube Kit (Includes Items 30, 31, & 32)	1
30	204P114*	Female Elbow - 1/4" Tube	1
31	2000188	Outlet Tube	1

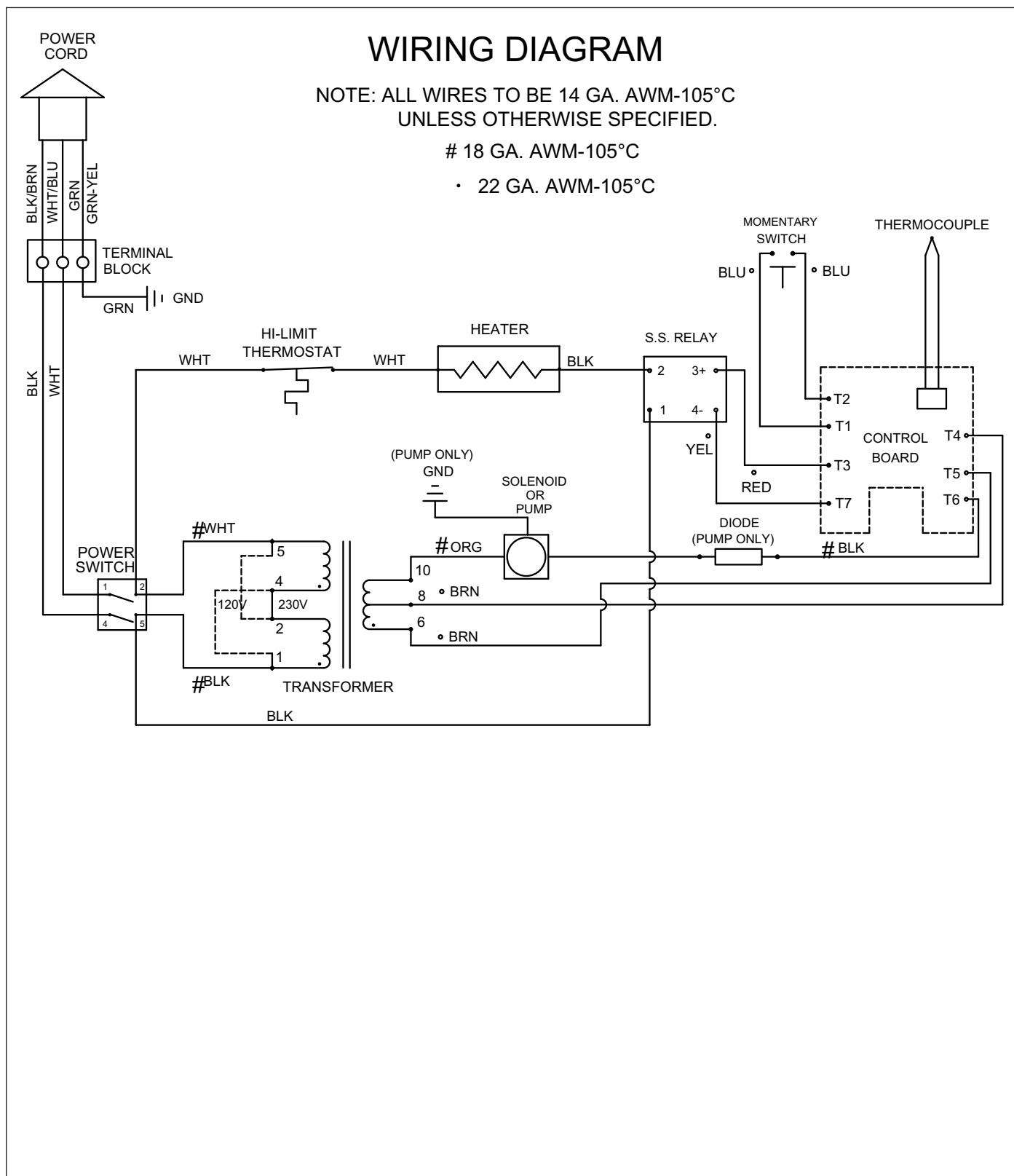
Item	Part No.	Description	Qty.
32	2040103	Male Connector - 1/4" Tube	1
33	4040145	Solenoid 24 VAC	1
34	7000138	Quick Disconnect Body & Plate Kit	1
35	1001036	Front Panel Label (Timer Models Only)	1
35a	1000976	Front Panel Label (Non-timer Models and Mfg. No. 9100147)	1
36	4010166	Operate Switch	1
37	4010137	Power Switch	1
38	7000317	Control Board (Timer Models Only)	1
38a	7000392	Control Board (Non-timer models) Mfg. No. 9100147)	1
39	7000319	Transformer	1
40	405K125	Solid State Relay	1
41	0010584	Inlet House Assy. (with Strainer)	1
42	7000139	Quick Disconnect Kit	1
43	0011251	Heat Sink	1
44	0503333	Temperature Sensor Bracket	1
45	7000156	Audio Alarm Kit	1
46	4050210	Probe, Thermistor (Mfg. No. 9100147)	1
A	308P104*	Screw, #8-32 x 3/8" - SS	1
B	308P103*	Screw, #8-32 x 1/4" - SS	1
C	308P164*	Screw, #8-32 x 1" - SS	1
D	325P109*	Hex Screw, #1/4" x 20 x 1/2" - SS	1
E	325P104*	Flat Washer	1
F	308P132*	#8-32 x 3/4" Flat - SS	1
G	306P123*	Screw, #6-32 x 7/8" - SS	1
H	308P124*	Screw, #8-32 x 1/2", 1 Way - SS	1
I	308P143*	Hex Nut, #8-32 - "KEPS"	1
J	306P101*	Hex Nut, #6-32 - SS	1
K	306P130*	Hex Nut, #6-32 "KEPS"	1
L	300P102*	"U" Type Tinnerman	1
M	306P103*	Screw, #6-32 x 3/8" - SS	1
N	020P117*	O-ring for Quick Disconnect	1
O	306P104*	Screw, #6-32 x 1/4" - SS	1
P	301P106*	Spotweld Nut, #6-32	1

* Items are available only in packages of ten (10) each.

WIRING DIAGRAM

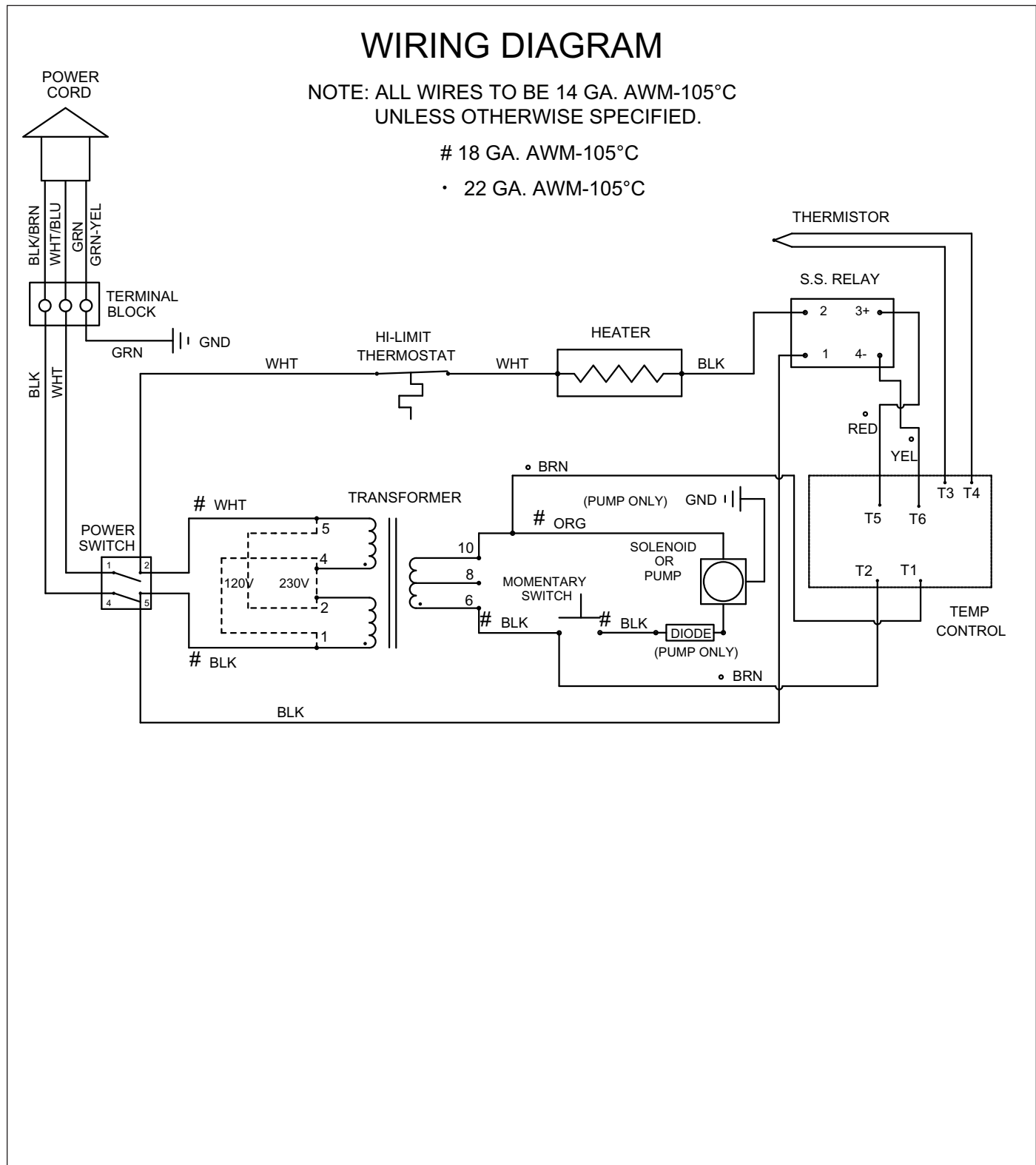
DFW/DFWT/DFWF-150/250 Only

Timer Models Only - Except DFWF-250 units with Mfg. No. 9100147



WIRING DIAGRAM (continued)

**DFW/DFWT-100/200 and DFWF-250 Models with Mfg. No. 9100147 Only.
Timer Models Only.**



This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

LIMITED WARRANTY

Equipment manufactured by Roundup Food Equipment Division of A.J. Antunes & Co. has been constructed of the finest materials available and manufactured to high quality standards. These units are warranted to be free from mechanical and electrical defects for a period of one year from date of purchase or 18 months from shipment from factory, whichever occurs first, under normal use and service, and when installed in accordance with manufacturer's recommendations. To insure continued proper operation of the units, follow the maintenance procedure outlined in the Owner's Manual.

1. This warranty does not cover cost of installation, defects caused by improper storage or handling prior to placing of the Equipment. This warranty does not include overtime charges or work done by unauthorized service agencies or personnel. This warranty does not cover normal maintenance, calibration, or regular adjustments as specified in operating and maintenance instructions of this manual, and/or labor involved in moving adjacent objects to gain access to the Equipment. This warranty does not cover consumable items such as the Platen, Release Sheets, Conveyor Belt Wraps, gaskets, O-rings, light bulbs, nor does it cover water contaminant problems such as foreign material in water lines or inside solenoid valves. It does not cover water pressure problems or failures resulting from improper/incorrect voltage supply. **This warranty does not pay travel, mileage, or any other charges for an Authorized Service Agency to reach the equipment location.**
2. Roundup reserves the right to make changes in design or add any improvements on any product. The right is always reserved to modify equipment because of factors beyond our control and government regulations. Changes to update equipment do not constitute a warranty charge.
3. If shipment is damaged in transit, the purchaser should make a claim directly upon the carrier. Careful inspection should be made of the shipment as soon as it arrives and visible damage should be noted upon the carrier's receipt. Damage should be reported to the carrier. This damage is not covered under this warranty.
4. Warranty charges do not include freight or foreign, excise, municipal or other sales or use taxes. All such freight and taxes are the responsibility of the purchaser.
5. THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, EACH OF WHICH IS HEREBY EXPRESSLY DISCLAIMED. THE REMEDIES DESCRIBED ABOVE ARE EXCLUSIVE AND IN NO EVENT SHALL ROUNDUP BE LIABLE FOR SPECIAL CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR THE BREACH OR DELAY IN PERFORMANCE OF THIS WARRANTY.



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